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THE ECONOMY OF BRITISH GUIANA. 1952-56

A NATIONAL ACCOUNTS STUDY

By

Carleen O'Loughlin

INSTITUTE OF SOCIAL AND ECONOMIC RESEARCH
UNIVERSITY COLLEGE OF THE WEST INDIES, JAMAICA, W.I.

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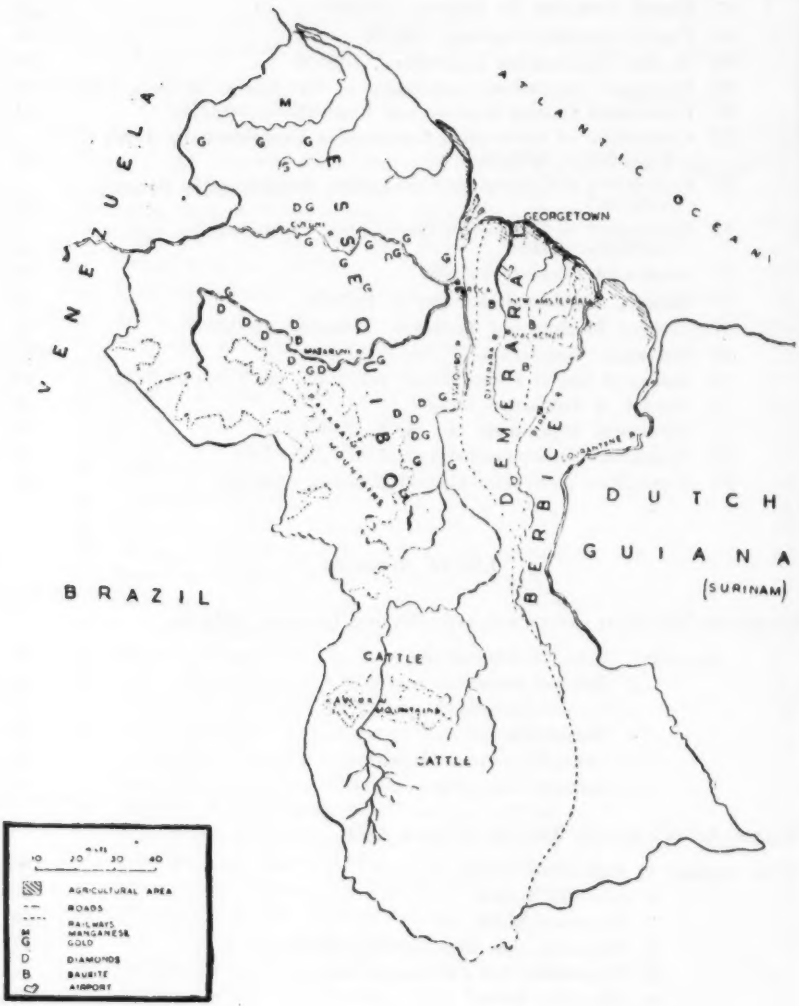
ECONOMIC MAP OF BRITISH GUIANA



FOREWORD

This monograph, "The Economy of British Guiana: A National Accounts Study" is published as a special number (Vol. 8, No. 1) of the Journal, *Social and Economic Studies*. The University College has been working in the field of national accounts on a project financed by the College, the Carnegie Corporation and the respective governments.

The chief purpose of the project was to undertake work relating to the analyses of the aggregates. Those working on the project have had, however, to devote more time to the preparation of estimates than was either hoped or expected. It has, however, been so difficult to secure economists that the territories have in most cases been able to make little progress with the establishment of machinery for work on national accounts. There seemed, in the circumstances, little alternative but that the University College should lead the way in making available basic estimates for the several territories and thus pave the way for later analytical work.

Dr. Carleen O'Loughlin, Research Fellow on the staff of the Institute of Social and Economic Research, has been in charge of the project from 1956 up to the present time. The first territory for which she prepared estimates was British Guiana and the present monograph presents the articulated accounts for this territory for the period 1952 to 1956. This monograph, however, goes much further than that and, as can be seen, is a study in the structure and growth of the British Guiana economy.

The College is grateful to the British Guiana government and its officials for the active help and collaboration shown throughout the conduct of the study.

H. D. Huggins

Director, Institute of Social
and Economic Research

PREFACE

The author would like to acknowledge the assistance given by the British Guiana Government in the preparation of this report. Office space and secretarial help were much appreciated. In particular the writer is indebted to Mr. H. O. E. Barker who not only assisted greatly by obtaining statistical information but who also discussed many of the more intricate aspects of the study through its various stages. Mr. Barker is also responsible for the very useful estimate of domestic product for 1957, presented in Appendix III. Acknowledgment is also due to Mr. L. Dennison for assistance with computing work. Many other government officers gave freely of their time, and to them acknowledgment is made.

The work in British Guiana was also much facilitated by the help provided by the larger organizations: Messrs. Bookers Ltd. and the Sugar Producers Association, Demerara Bauxite Company and Messrs. Sprostons Ltd., all of whom furnished figures and information of general interest. Many smaller businesses and growers must also be thanked for patiently answering a variety of questions.

The writer is indebted to Miss Phyllis Deane who kindly consented to read and criticize the final draft of the report. Her suggestions resulted in improvements in the general lay out and presentation of the work. Mr. Dudley Seers has advised and encouraged throughout the project and Mr. Alfred Thorne sent some useful criticisms of the final draft.

There are several possible methods of presenting a national income report, none of which is completely satisfactory. The general plan of this work is as follows:

Part I includes firstly a brief chapter describing British Guiana, mainly for the benefit of readers who may not be familiar with the country. The second chapter gives a general preview of the salient points emerging from the statistical data. Chapters III and IV present two sets of articulated accounts, the first, the set of standard U.N. accounts and the second, a set of sector accounts articulated in the form of a matrix.

Part II of the study, which includes Chapters V to XI, describes the methodology employed in detail and lists the sources of data. It will be noted that the main tables included with each of these chapters (except the last one) follow closely the standard supplementary tables advocated in the United Nations system.

Part III includes two chapters which are concerned with governmental policy and planning, the first discussing the effects of the Development Programme and the second a discussion of the machinery by which regular national accounts may be produced by government.

This study adheres fairly rigidly to the United Nations system of accounts.

It is recognized that this is not necessarily the best for presenting the economic structure of an underdeveloped country. It is also recognized that the sector accounts in Chapter IV may be criticized on the basis of their failure to show individual sectors for the main export industries of sugar and bauxite. This however is unavoidable in a country where the main export industries are virtual monopolies.

Although it is clear that the United Nations system does not, in its present form, answer the needs of an underdeveloped country fully, it is felt that the development of a "West Indian" system of national accounts must result from several studies of this nature in different territories. Such a system must have international comparability and yet must be geared to the particular needs of the region. It must also be based on a firm and uniform foundation acceptable throughout the region. It is thus felt that a first step in the regional programme for national accounting should be the production of estimates for all the territories on the basis of an accepted system of accounts. From there the territories can modify the system on a regional basis in co-operation with each other until it answers best the requirements of economic planners and administrators on both a regional and a unit basis. The alternative to this would seem to be a situation in which each statistician is experimenting with a system most suited to the needs of one territory, which may not be comparable with the estimate in other territories, which may not be continued should the initiator leave the territory, and which may not be understood by administrators and others who have learned to interpret one of the established systems.

The system of accounts presented in this work are not then considered to be an ideal model for a West Indian country but rather as a stage in the development of national accounting in the region. This development it is considered should firstly aim to establish a degree of uniformity throughout the region and train local personnel in the handling of an established system and secondly to modify that system to answer better the needs of the area.

PART I

CHAPTER I

A Brief Description of the Country

British Guiana is the only British possession on the mainland of South America. It lies between Latitudes 1° North and 9° North and Longitudes 50° West and 62° West. It is bordered by Venezuela on the north-west, Brazil on the west and south-west and Dutch Guiana on the south-east. The total area of the colony is approximately 83,000 square miles of which only 280,000 acres are cultivated.

There is a great variety of topographical and climatic conditions in this area, a fact which is not always fully appreciated, even by the residents of the country, few of whom journey into the hinterland from the coastal area of densest population. There are three mountain regions, Kanuku, Pakaraima and Merume, separated by high savannah areas. Between these higher lands and the coastal belt lie intermediate and lower savannah (the soil of which is predominantly white sand) and palm forest for the most part adjacent to the river valleys. Except for a few pockets in the higher valleys and adjacent to the rivers, the soil of the interior of British Guiana is for the most part sandy and of little agricultural value. Cattle rearing and forestry however, take place in the interior. There are several large ranches in the area of the Rupununi Savannah, although the quality of the grassland permits extensive grazing only. Valuable commercial timber is found on the borders of the lower savannah and the upland country, and in some more accessible places between the upper valleys and the main rivers.

Agricultural activity is however concentrated on the coastal belt. The main sugar growing region stretches from the west bank of the Corentyne river to the east bank of the Essequibo. Rice is grown throughout this region and also in the Essequibo islands and the west bank of the Essequibo estuary. This coastal belt stretches inland as far as 30 miles in some areas but its average width is only approximately 15 miles.

The coastal area is extremely low lying and is partly below sea level at high tides. Water control is the primary economic problem of this area, and indeed of practically the whole of British Guiana, as the large number of rivers and creeks in the interior are subject at times to flooding, and most of the land would have to be drained if used for agricultural purposes. The coastal problem however is of a rather difficult nature as it also involves keeping the sea out and conserving fresh water supplies. Irrigation is possible in some parts, the water coming from conservancies situated at the junction of the coastal plain and the white sand region. The coastal belt

was first empoldered in the early days of Dutch settlement and many of the sea walls and other workings are very old. Recent Development and Welfare schemes have extended drainage and irrigation to new areas in the coastal belt. Flood and drought conditions occur regularly in British Guiana and a situation in which there is either too much water or not enough is usual. It may thus be said that drainage and irrigation is the core of the agricultural problem.

That part of British Guiana which lies between the Essequibo and the Venezuela border and near to the coast is similar in natural characteristics to the remainder of the coastland. It is however extremely well watered and is not drained by artificial means, thus it is swampy in wet weather. In the Pomeroon region there are patches of higher sandy land which is more self draining but on which the soil is too light for most crops.

The most important mineral available in British Guiana is bauxite. This industry accounted (in 1956) for 25 per cent of the value of domestic exports and 10.5 per cent of the gross domestic product. Gold and diamonds are fairly important industries. Manganese is being mined now in the North Western district but exports during the period of the survey were small. The largest bauxite deposits lie between the Berbice and Demerara rivers, about 100 miles from the coast. The recent geological survey has not proved the existence of other large bauxite deposits nor is there very much evidence of major deposits of other minerals, although many commercial minerals are known to exist in small quantities. China clay and silica sand abound in British Guiana and are of a high quality suitable for glass and pottery manufacture.

The rivers provide a natural system of communications which have been of great economic value to the bauxite and timber industries and to some extent to the rice industry. Sugar and rice however, tend to move in an east-west direction along the coastline. Water transport, both by river and sea is the main method of moving heavy freight. There is also a railroad 80 miles long which runs between the Essequibo and the Berbice rivers. Ferry steamers link Georgetown with Vreed-en-Hoop on the west bank of the Demerara and Rosignol with New Amsterdam on the Berbice rivers. Coastal passenger steamers link Georgetown with Parika and Bartica and travel 160 miles up the Berbice river. The main rivers are the Corentyne, Berbice, Demerara and Essequibo-Cuyuni-Mazaruni. The main rivers have their sources beyond the boundaries of British Guiana, mainly in Brazil, and flow northward to the Atlantic seaboard. The Mahaicony-Abary and the Pomeroon are also large rivers, with navigable stretches. The Berbice and Corentyne are navigable for over 100 miles from the sea and the Demerara for about 80 miles. The Essequibo is only navigable from the sea in the estuary region owing to rapids. There are considerable navigable stretches above the rapids, on the Mazaruni and Cuyuni.

British Guiana airlines serve the interior with Grumman Goose amphibious

aircraft. The airlines also run services to Trinidad in competition with B.W.I.A. A number of international airlines use the airport at Atkinson Field, 28 miles from Georgetown.

There are 260 miles of road on the coastland. The main roads are between Springlands on the Corentyne and New Amsterdam, Rosignol and Georgetown and Vreed-en-Hoop and Parika. The east bank road links Georgetown with the airbase at Atkinson Field. There are a few miles of road up the west bank of the Demerara and east bank of the Berbice and on the west coast of Essequibo. The cattle trails in the interior are trodden ways which cover a large area and link the ranching areas with the main rivers. Many miles of these can be driven over by jeep and although they receive little maintenance, the white sand which provides their base drains fairly well. The main problem of building roads on the coastland is that the foundation is not naturally drained and consists in part of shifting mud. There is an absence of any quarry metal in this region. Burnt earth has long been used as a surface. It is not efficient and it does not permit of a strong firm base being gradually built up as would stone and gravel. Experiments with white sand have indicated that if closely packed it can make a hard, good draining surface, but these materials cannot provide a strong permanent base such as results from the continual application of road metal over a period of time. Road building on the higher land is not so difficult and good roads were built on the undulating land at the air-base, by U.S. forces during the war. In British Guiana a large amount of money has been spent on roads with very little to show for it. It is however of paramount importance to the development of the economy that more roads are built and that existing roads are improved to facilitate transportation and reduce wear and tear on vehicles.

The climate of British Guiana varies, as would be expected, from district to district. There is not, however, a great deal of variation in the coastal plain where most of the agricultural activity takes place. The rainfall averages about 58 inches per annum in the savannahs and 90 inches on the coastal belt. There is some considerable variation from year to year however. In Georgetown the rainfall for the five years 1951-1955 was (in inches) 92, 114, 93, 94 and 147. The coastal climate of British Guiana is pleasant as temperatures rarely exceed 85° Fahrenheit with an average humidity of 81 and there is generally a sea breeze. The main problem is that of uneven distribution of rainfall throughout the year.

The population of British Guiana is of varied racial origin, as is shown in Table 1.

It is estimated that 88 per cent of the population are living in the coastal belt or in an area comprising approximately 2.5 per cent of the total land area of the country. Throughout the coastal belt however, the population is fairly well distributed, the population of Georgetown and New Amsterdam (the two largest towns) being approximately 110,000, and the remainder of the population being spread out in the coastal lands.

TABLE 1. POPULATION: END OF YEAR ESTIMATES, 1956

	Males	Females	Total
East Indians	122,620	116,330	238,950
African descent	84,950	90,210	175,160
Mixed	27,830	29,420	57,250
Chinese	1,770	1,570	3,340
Portuguese	3,580	4,240	7,820
Other European	1,980	2,400	4,380
Amerindians	10,220	9,780	20,000
Total	252,950	253,950	506,900

Source: Annual Report of the Registrar-General, 1956.

There is some tendency for racial groups to concentrate on certain economic activities. Although there are a sizeable number of Africans in sugar and rice, the great majority of farmers and sugar estate workers are East Indians. Africans are in the majority in Georgetown and in the mining population of Mackenzie. Trade and commerce is mainly operated by some East Indians, Chinese and Portuguese, with other Europeans predominating in the salaried posts of the large commercial and producing concerns. There is some evidence that this race-occupation pattern is becoming less rigid as general standards of education are raised. The Amerindian minority still lives in conditions which are backward compared with the rest of the community and their opportunities for cash-earning activities are confined solely to the forestry industry and in a few cases the sale of garden produce.

The organization of economic activity in British Guiana is on the whole of a simple pattern. A large concern of expatriate origin virtually controls sugar production and milling. Cane is mainly grown on the estates, a negligible amount only by small farmers. The rice industry is, on the other hand essentially a peasant industry. Meat production is carried out mainly by a few ranchers but all other forms of agricultural production are carried on by medium or small holdings. Forestry is a mixed industry with both large and small concerns, but there is a tendency for concentration of capital to be increasing. Bauxite mining is carried on by two companies although others have invested in prospecting from time to time. There is one large gold mining concern, but both gold and diamonds are mined on small prospects. In commerce, importing is rather more concentrated than in most West Indian territories, the sugar companies controlling a large part of the importing and wholesale business. The same firms enter into retailing and manufacturing to some extent but are less important in these spheres. There are a number of other large retailers as well as many small stores. The most striking aspect of the economic structure of British Guiana is however the importance of the sugar companies in many spheres of economic life. There is probably no other West Indian economy in which one concern or group of associated concerns plays such an important part.

These introductory notes on the colony are designed to present a general picture against which the economic statistics to follow may become more

meaningful, particularly for readers who may not be familiar with the country. These notes are by no means complete, however, and for further information on the geography, history and demography of the country, References *(6, 23, 25 and 28)* should be consulted.

CHAPTER II

An Interpretation of the Accounts and Tables

An underdeveloped country is usually defined as a country which has (a) a low *per capita* income, (b) a high dependence on overseas capital and skills, (c) a relative scarcity of capital as compared with the other factors of production, land and labour, and (d) a high degree of dependence on a few staple products.

British Guiana is an underdeveloped country by comparison with such countries as the United States, United Kingdom and most European countries. In comparison with other West Indian countries British Guiana may be said to be less developed than Trinidad, which has a slightly higher *per capita* income and a slightly more capitalized and diversified economy *(5)*. During the period under review the *per capita* income in British Guiana was comparable to that in Jamaica, but the economy of Jamaica is more diversified and the rate of increase in income is faster *(11, 26)*. British Guiana is a slightly wealthier country than most of the islands of the Leewards and Windwards.

The economy of British Guiana is characterized not only by a surplus of unskilled labour relatively to other factors, but unlike other West Indian territories, by a relative surplus of land. This land, however, cannot enter the economy as a productive resource without capital and its existence does not alter materially the problem which British Guiana shares with other West Indian countries, the necessity for capital to create income and employment. Indeed the existence of free land makes the problem more complex because the risk of spreading capital too thinly over a wide land area instead of securing an optimum land-labour-capital combination is greater in British Guiana than in other territories.

The tables and accounts presented in this report illustrate the structure of the economy of British Guiana and the changes in economic activity in the five year period 1952-56. Perhaps the most valuable table showing the structure of the economy is Table 5 which gives an industrial breakdown of the gross domestic product.

From this table we see that agriculture, forestry and fishing contribute 25.8 per cent to the gross domestic product, mining, construction, processing and manufacturing contribute 33.8 per cent, the tertiary industries 27.1 per cent and government 13.3 per cent.

In very underdeveloped countries, as for instance the Belgian Congo and Nyasaland, we find agriculture contributing about 60 per cent to the gross domestic product. A direct comparison with British Guiana is however, misleading as a considerable part of the secondary industry in British Guiana

is concerned with the processing of primary products such as rice and sugar milling. These industries account for 11 per cent of the gross domestic product. Manufacturing, which includes the production of all final products accounts for only 3 per cent of the gross domestic product (as compared with 8 per cent for Jamaica).

During the five year period, the share of agriculture dropped from 32 per cent to 26 per cent and the share of the secondary and mining group rose from 29 per cent to 34 per cent. This was mainly due to an increase in bauxite values and to increased capital formation (mainly government capital formation).

British Guiana is slightly more dependent on overseas trade than is Jamaica; this again is the result of the greater diversification in the latter economy. If we take imports as a percentage of the gross domestic product at market prices (Account 1) we find this averaged 42 per cent for the five years whilst in Jamaica, in 1955, the figure was 35 per cent.

British Guiana is highly dependent on the two main industries, bauxite and sugar, for her income. With the other two significant export industries timber and rice, these industries accounted for 25 per cent of the gross domestic product at factor cost. The comparable figure for the main export industries in Jamaica in 1955 was 12 per cent. Although the sugar industry is of great importance in the economy of British Guiana, it is not of such relatively high importance as are the sugar industries of St. Kitts and Barbados to the economies of those islands.

The *per capita* income of British Guiana for the five years is shown in Table 2. This figure is arrived at by dividing the gross domestic product at factor cost (Table 5) by the population.

TABLE 2. *Per Capita* INCOME: BRITISH GUIANA, 1952-56, AND JAMAICA AND TRINIDAD, 1954.

	1952	1953	1954			1955	1956
	B.G.	B.G.	B.G.	Jamaica	Trinidad	B.G.	B.G.
Per Capita income, $	334.3	364.7	389.4	375.1	597.3	385.3	441.1

These figures indicate that in 1954 the *per capita* income in British Guiana was higher than Jamaica and lower than Trinidad. In Jamaica, however, the income of households is a higher proportion of the gross domestic product than in British Guiana (this reflects the greater dependence on overseas capital of British Guiana). In 1955 the personal income per head in Jamaica was $342.7 whilst in British Guiana it was $324.4 in the same year. This figure is a better indication of the relative purchasing powers of households in the two countries. Allowing for the fact that prices were slightly higher in Jamaica, they are thought to have been roughly equal in that year. Since 1955 however, it is believed that personal incomes in Jamaica have increased at a greater rate than those in British Guiana.

Although British Guiana cannot therefore rate amongst the poorest of West

Indian territories in terms of income per head, the growth of income in the colony during the year under review is disappointing, particularly as compared with Jamaica and Trinidad. Table 3 shows the gross domestic product for each year expressed as a percentage of 1952 for Jamaica and British Guiana.

TABLE 3. PERCENTAGE GROWTH OF THE GROSS DOMESTIC PRODUCT, JAMAICA AND BRITISH GUIANA, 1952-56.

	1952	1953	1954	1955	1956
British Guiana	100	111	121	121	130
Jamaica	100	112	126	143	166

The setback in 1955 in British Guiana can largely be traced to poorer yields in agricultural commodities in late 1954 and 1955 as well as to a small decrease in certain prices. It illustrates the dependence of the economy on prices and yields of a few agricultural products. The economy of Jamaica, although still dependent on export prices to a high degree, is slightly less vulnerable owing to its increased diversification. Nevertheless the increases in Jamaican income result mainly from increased values in the main export industries.

Like most West Indian countries British Guiana has a large labour force but one which is not employed regularly throughout the year. Wages are low in these countries and a large proportion of the lower income groups carry on small farming and other enterprises as well as wage earning. Account 2 shows remuneration of employees (wages and salaries) to have been 55.2 per cent of national income in 1955. The share has increased from 51.7 per cent in 1952. In Jamaica, the comparable figure for 1955 was 57.6 per cent.

There are no reliable figures of capital stock for the economies of the West Indies, but as in all these countries, capital intensity is low in British Guiana. In agriculture there are many small farms which employ virtually no capital whilst on the sugar estates capital intensity is higher. Most aspects of cultivation are mechanized but there is no mechanized harvesting. In rice farms and other small farms, machinery is used quite extensively, and owing to the flat nature of the land more small farmers have access to tractors and other machinery for hire than is possible in Jamaica. It must also be remembered that owing to the drainage system, the land of British Guiana includes a high capital component relatively to other parts of the West Indies. Extensive renewal of sugar-making machinery has taken place in the last few years and investment in mining has increased. With a few small manufactures, mining and milling are the most capital-intensive industries; mining employs rather less labour and relatively more capital than does milling.

Capital formation per head increased from $55.4 in 1952 to $95.0 in 1956. Jamaica in 1955 recorded capital formation equivalent to $76.3 per head. Practically all the increase in British Guiana has, however, been under the development budget and it is unlikely that the boosting effect of this type of investment is as great as that in Jamaica which includes a greater propor-

tion of private investment. As a proportion of the gross domestic product at market price, capital formation rose from 14.8 per cent in 1952 to 20.7 per cent in 1956. The figure again reflects the increase in government capital formation rather than in private. Table 46 shows that house-building increased very substantially in the period and although a great deal of this was done on a government loan basis it does reflect to some extent the growth in personal income.

In Table 48 the sources of capital funds are listed. It is interesting to note from this table that in 1952 one third of investible funds was coming from overseas (excluding depreciation on expatriate assets). In 1956 nearly one half of the much greater investment was of overseas origin.

As regards household saving and that of local firms, it will be remembered that in national accounting personal saving is taken as a residual item which does reduce the reliability of this figure. It appears however, from the available information that a quite considerable sum is being invested overseas by residents and resident firms each year. During 1953 and 1954 this outflow of capital increased but its average annual level appears to approximate to $2 million. In considering the possibilities of diverting this annual outflow consideration should be taken of the fact that much of the capital invested externally during the 1952-56 period has not been repatriated and provides a possible source of investible funds to the country could it be lured back. Even if we allow for a substantial error in our estimates (this being a notoriously difficult figure to arrive at), it still appears that there may be assets worth some $20 million in overseas countries which are the property of Guianese firms and individuals, who are people coming under the category of regular investors. A very small part of these values relate to the really small saver whose savings may be canalized through such institutions as savings banks and credit societies.

The increase in capital formation during the years 1955 and 1956 is seen as one of the main reasons for the income increase in 1956. This is likely to have an even greater effect on incomes in 1957 and 1958. Some doubts are entertained however, as to whether the capital formation is all of the type to procure a sustained rise in incomes once the initial capital expenditure has been completed. During the years under review, 1952-56, there was little alteration in the annual rate of capital formation in the basic industries, sugar and bauxite. Investment in these industries, is, however, "lumpy", there having been big outlays in the years up to 1952, and in the bauxite industry the planned investment in an alumina plant from 1957-59 is likely to inflate the private investment figures for those years very substantially.

The main reason why local residents tend to invest their savings outside the country is of course the lack of attractive investment opportunities within the country, investment opportunities in the main industries not usually being available to local residents. Such enterprises as the brewery and a few other local manufactures, although small as compared to the total of

capital in the country, are extremely valuable in that they provide investment opportunities for Guianese in their own country and they also contribute towards the growth of a diversified domestic economy.

The pattern of consumers' expenditure can tell us several things about the structure and development of an economy. A poorer country tends to spend a higher proportion of its total expenditure on food. In Jamaica in 1955 41 per cent of household expenditure was on food (excluding drinks and tobacco). In British Guiana the proportion in 1956 was only 30 per cent. A closer examination of this figure however, shows that a direct comparison is slightly misleading since food prices are lower in British Guiana relatively to other prices than is the case in Jamaica. There is for instance, a greater tendency for rice (which is relatively cheap in British Guiana) to provide the basis for the diet.

Table 49 which shows the pattern of expenditure indicates that there was little change in the food pattern during the period; the only trend worth noting being an increase in fish consumption which was to some extent in substitute for meat which was, at times, in inelastic supply. Any increases in incomes seem to be spent mainly on transport, clothing and household goods. The import content of consumer goods rose slightly over the period but there is much indication that the marginal propensity to import is directly related to the inelasticity of supply of local goods, as for instance, the substitution of tinned meat for fresh meat. This is an indication of the lack of diversity in the economy which appears not to be supplying the local market to the extent which demand conditions make possible.

In 1952 the government current expenditure to factors of production contributed 10.2 per cent to the gross domestic product and in 1956 13.25 per cent. This reflects the increase of government activity in the period, the total of government current expenditure having increased from $28.5 million in 1952 to $40.2 million in 1956. The rates of both direct and indirect taxes per head of the population are higher in British Guiana than in Jamaica but this comparison is a little misleading as there are "economies of scale" in government and many government services can be provided at a lower cost per head to a larger population than to a smaller. A greater part of the direct taxes are paid by companies in British Guiana. In 1956, 75 per cent of direct taxes were paid by companies as compared with 59 per cent in Jamaica. Indirect taxes per head are higher in British Guiana than in Jamaica but there is some evidence that their incidence on necessities or semi-necessities is lower in British Guiana.

The rates of taxation do not vary greatly between one British West Indian country and another. Most of the territories, including British Guiana, now grant tax concessions to new industries, and although these may be of value in attracting investment it is considered doubtful whether small differences in the rate of profits tax influence investors to go to one territory rather than another. As compared with many underdeveloped countries, the

rate of government expenditure is high in British Guiana. This is likely to increase as investments made under the development schemes have to be operated and maintained. The borrowing of further large sums by government or the acquisition of non-liquidating assets should thus be carefully considered in the light (a) of their possible contribution to the revenue through raising of incomes and higher tax yields or, (b) the possibility of their contributing directly to revenues or being self-liquidating. Investment for instance in peasant farming projects, which may be desirable from other points of view, is unlikely to increase the revenue as the incomes created by it are usually small ones shared amongst a large number of people. Social service expenditure moreover, may place a burden on the revenues for recurrent running costs. Self-liquidating schemes such as housing loans and industrial and agricultural credits do not however create a permanent call on government expenditure.

The accounts and tables thus illuminate certain salient features in the economy of British Guiana. We find that although British Guiana is not the poorest of West Indian colonies in terms of income per head, that progress has been slow in the last few years compared to Jamaica and Trinidad. Although there are some signs of diversification, there has been a strong tendency for recent private investment to move towards the established staple industries of sugar, timber and bauxite, and public investment towards rice. The structure of the economy still follows very closely the "old colonial pattern" in which capital is concentrated and a few firms of mainly expatriate origin carry on much of the productive and distribution activities in the country. There is in existence a small local business class but this pre-dates the recent development period and is mainly concerned with distribution. Opportunities for local investment of savings are limited and although capital is urgently needed there is believed to be an annual capital outflow of local savings seeking investment overseas. This position is made more anomalous by the fact that the supply of locally produced consumer goods, particularly fruit and vegetables, is inelastic and has not met the full effective demand. The alumina plant which is now being constructed represents a step forward in that it involves bringing the processing of local raw materials a stage further from primary extraction, but all in all there has not been, as yet, much interest taken by either local or overseas capital in processing and manufacturing local raw materials for export.

The economy is characterized by a high degree of underemployment and this again is partly due to its dependence on industries in which employment is of a casual nature. Although annual average earnings were not low as compared with those in any West Indian country (except Trinidad) in 1956, there is evidence that there is a wider range of incomes in the wage-earning class in British Guiana and that a large group of wage-earners is only able to obtain work of a very casual and seasonal nature.

Although therefore, the economy has made some progress since 1952 this

has been largely the result of capital expenditure (mainly by government), of increased incomes in the bauxite industry, and increased government current expenditure. These have been the sectors in which incomes have been subject to a direct increase. The disposal of these increased incomes appears in the main to have benefited the distribution and transport sectors.

CHAPTER III

A System of National Accounts for British Guiana, 1952-56

The accounts presented in this chapter are a slightly simplified version of the accounts recommended in the United Nations publication *A System of National Accounts and Supporting Tables (27)*. Five of the supporting tables are presented in the chapters following.

The main difference between the United Nations system and that prepared for British Guiana is that the capital reconciliation accounts have not been included but appropriations are shown directly between the capital account and the other accounts. Although these reconciliation tables are valuable in that they detail the sources and use of capital funds, the detailed information available for British Guiana was not of a high accuracy and it is felt that the present system gains both from simplicity and greater accuracy. More detailed breakdowns are however shown in the chapters on capital formation and external transactions.

Account 1, the Gross Domestic Product Account, is the consolidated product account for the economy of British Guiana during the period 1952-56. Firstly the gross domestic product is shown at factor cost. Indirect taxes are then added and subsidies subtracted to bring it to a market price basis. On the right hand side, expenditure on gross domestic product is shown both for capital and consumption purposes and the adjustment is made for the difference between imports (visible and invisible) and exports.

In the British Guiana accounts a subdivision is shown between cash and non-cash income and expenditure. This is a departure from the U.N. system but is considered to be of value in a country in which non-cash production is of some importance.

The National Income Account (Account II) differs from the United Nations account only in that interest on consumer debt, not having been added in property income is not deducted from the left hand side of the account. The gross national income is equal to the gross domestic product at factor cost, less factor income paid overseas and with the addition of factor income received from overseas by residents of British Guiana. The net national income is equal to this total, less depreciation (provision for consumption of fixed capital).

On the left hand side of this account the distribution of the net national income is shown. The first three items represent the incomes of households. The assumption is made that all incomes of unincorporated business is absorbed into the household sector for consumption purposes. Item 2.4 represents the savings of resident corporations only.

The Domestic Capital Formation Account is identical with Account 3 in

the United Nations system except that the item "international transfers received by corporations" could not be distinguished with any degree of reliability from the item "net borrowing of corporations". In the British Guiana account the item "grants" which includes grants under Development and Welfare and Mutual Security Agency schemes is shown separately. Details of the components of capital formation are given on pp. 51-54.

The households account is similar to Account 4 in the U.N. system but saving has been transferred directly to the Capital Formation Account instead of *via* a capital reconciliation account. Similarly in the Government Account (Account 5) only government current transactions are detailed. It should be noted that the item "Government Consumption Expenditure" is less than the figure for total government current expenditure. The difference is equal to items which have been paid for by households (such as school fees, medical treatment and other services) and which have already been accounted for under item 1.4 (see Account 1, items 1.4 and 1.5).

The External Transactions Account (Account 6) is again rather an abbreviated account as compared with those in the U.N. model. The item "net borrowing of the nation" is less detailed in the British Guiana accounts than in the United Nations system. It has not been possible to detail this item with the degree of accuracy that one would have wished, and rather than overcomplicate the accounts, the item has been left as an amalgamated item, but a further breakdown is shown in the section on the Balance of Payments.

The information shown in the system of accounts is derived from the data composing the tables presented in Chapters V - XI, and the sector accounts, Chapter IV. Information regarding the sources utilized and method of compilation is detailed in Part II of this study.

ACCOUNT 1. Gross Domestic Product

$ Thousand

	1952	1953	1954	1955	1956		1952	1953	1954	1955	1956
1.1 G.D.P. at factor cost (2.9)	159,773	176,916	192,751	192,669	208,017	1.4 Private consumption expenditure (4.1)	129,987	136,087	143,692	146,222	158,493
(a) Cash	152,652	170,368	186,251	186,440	200,847	(a) Cash	122,866	129,539	137,192	139,993	151,323
(b) Non-cash	7,121	6,548	6,500	6,229	7,170	(b) Non-cash	7,121	6,548	6,500	6,229	7,170
1.2 Indirect taxes (5.7)	20,378	20,440	21,670	25,961	26,388	1.5 General government consumption expenditure (5.1)	21,340	21,807	22,218	25,958	28,376
1.3 *Less* subsidies (5.2)	-1,859	-2,323	-3,104	-2,768	-2,157	1.6 Gross domestic fixed capital formation (3.1)	25,856	26,871	36,116	45,458	48,000
						1.7 Increase in stocks (3.2)	650	-2,420	2,259	525	92
						1.8 Exports of goods & services (6.1)	83,965	85,522	87,909	93,146	98,202
						Expenditure on G.D.P. & imports	261,798	267,867	292,194	311,309	333,163
						1.9 *Less* imports of goods and services (6.6)	-83,506	-72,834	-80,877	-95,447	-100,915
Gross domestic product at market prices	178,292	195,033	211,317	215,862	232,248	Expenditure on gross domestic product	178,292	195,033	211,317	215,862	**232,248**

ACCOUNT 2. National Income

$ Thousand

	1952	1953	1954	1955	1956		1952	1953	1954	1955	1956
2.1 Compensation of employees (4.5)	74,604	82,911	95,150	96,192	109,294	2.9 G.D.P. at factor cost (1.1)	159,773	176,916	192,751	192,669	208,017
2.2 Income from farms, professions and unincorporated enterprises (4.6)	52,802	57,371	60,885	54,889	57,482	2.10 Net factor income payments from rest of world (6.2 & 6.7)	-7,527	-10,254	-9,874	-9,367	-11,101
2.3 Income from property (4.7)	7,150	7,050	6,500	6,039	6,019	2.11 *Less* provisions for consumption of fixed capital (3.3)	-7,962	-7,641	-7,807	-8,924	-8,432
2.4 Savings of resident corporations (3.4)	911	1,724	1,043	4,534	3,186						
2.5 Direct taxes on corporations (5.8)	7,849	9,274	10,609	11,597	11,500						
2.6 General govt. income from property and entrepreneurship (5.5)	2,019	1,816	2,051	2,320	2,575						
2.7 *Less* interest on public debt (5.6)	-1,051	-1,125	-1,168	-1,193	-1,572						
National income	144,284	159,021	175,070	174,378	188,484	Net national product at factor cost	144,284	159,021	175,070	174,378	188,484

ACCOUNT 3. Domestic Capital Formation

$ Thousand

	1952	1953	1954	1955	1956		1952	1953	1954	1955	1956
3.1 Gross domestic fixed						3.3 Provision for con-					

ACCOUNT 3. Domestic Capital Formation

$ Thousand

	1952	1953	1954	1955	1956		1952	1953	1954	1955	1956
3.1 Gross domestic fixed capital formation (1.6)	25,856	26,871	36,116	45,458	48,000	3.3 Provision for consumption of fixed capital (2.11)	7,962	7,641	7,807	8,924	8,432
3.2 Increase in stocks (1.7)	650	-2,420	2,259	525	92	3.4 Savings of resident corporations (2.4)	911	1,724	1,043	4,534	3,186
						3.5 Savings of households (4.4)	7,380	14,316	21,993	14,246	16,541
						3.6 Savings of general govt. (5.4)	2,309	2,239	3,723	3,863	4,753
						3.7 Net borrowing of the nation (6.8)	5,355	-3,340	1,445	10,533	10,348
						3.8 Grants (6.5)	2,589	1,871	2,364	3,883	4,832
Gross domestic fixed capital formation	26,506	24,451	38,375	45,983	48,092	Finance of gross domestic fixed capital formation	26,506	24,451	38,375	45,983	48,092

ACCOUNT 4. Households

$ Thousand

	1952	1953	1954	1955	1956		1952	1953	1954	1955	1956
4.1 Consumption expenditure (1.4)	129,987	136,087	143,692	146,222	158,493	4.5 Compensation of employees (2.1)	74,604	82,911	95,150	96,192	109,294
4.2 Direct taxes (5.9)	1,313	1,583	1,605	1,765	3,803	4.6 Income from farm, professions and unincorporated business (2.2)	52,802	57,371	60,885	54,889	57,482
4.3 Other current transfers to govt. (5.10)	—	—	—	—	—	4.7 Income from property (2.3)	7,150	7,050	6,500	6,039	6,019
4.4 Saving (3.5)	7,380	14,316	21,993	14,246	16,541	4.8 Current transfers from general government (5.3)	3,866	4,383	4,491	4,781	5,465
						4.9 Net remittances from rest of the world (6.3)	258	271	264	332	577
Disposal of income	138,680	151,986	167,290	162,233	178,837	Income of households	138,680	151,986	167,290	162,233	178,837

ACCOUNT 5. General Government (Current)

$ Thousand

	1952	1953	1954	1955	1956		1952	1953	1954	1955	1956
5.1 Consumption expenditure (1.5)	21,340	21,807	22,218	25,958	28,376	5.5 Income from property and entrepreneurship (2.6)	2,019	1,816	2,051	2,320	2,575
5.2 Subsidies (1.3)	1,859	2,323	3,104	2,768	2,157	5.6 *Less* interest on public debt (2.7)	-1,051	-1,125	-1,168	-1,193	-1,572
5.3 Current transfers to households (4.8)	3,866	4,383	4,491	4,781	5,465	5.7 Indirect taxes (1.2)	20,378	20,440	21,670	25,961	26,388
5.4 Saving (3.6)	2,309	2,239	3,723	3,863	4,753	5.8 Direct taxes on corporations (2.5)	7,849	9,274	10,609	11,597	11,500
						5.9 Direct taxes on households (4.2)	1,313	1,583	1,605	1,765	3,803
						5.10 Other transfers from households (4.3)	–	–	–	–	–
						5.11 Net transfers from rest of the world (6.4)	-1,134	-1,236	-1,231	-3,080	-1,943
Disposal of current revenue	29,374	30,752	33,536	37,370	40,751	Current revenue	29,374	30,752	33,536	37,370	40,751

ACCOUNT 6. External Transactions

$ Thousand

	1952	1953	1954	1955	1956		1952	1953	1954	1955	1956
6.1 Exports of goods and services (1.8)	83,965	85,522	87,909	93,146	98,202	6.6 Imports of goods and services (1.9)	83,506	72,834	80,877	95,447	100,915
6.2 Factor income payments to the nation (2.10)	1,044	1,122	1,141	1,241	1,396	6.7 Factor income paid overseas (2.10)	8,571	11,376	11,015	10,608	12,497
6.3 Net remittances from rest of the world (4.9)	258	271	264	332	577	6.8 Net lending to rest of the world (3.7)	-5,355	+3,340	-1,445	-10,533	-10,348
6.4 Net transfers to government (5.11)	-1,134	-1,236	-1,231	-3,080	-1,943						
6.5 Grants (3.8)	2,589	1,871	2,364	3,883	4,832						
Receipts from abroad	86,722	87,550	90,447	95,522	103,064	Disposal of receipts	86,722	87,550	90,447	95,522	103,064

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6.5 Grants (3.8)	2,589	1,871	2,364	3,883	4,832					
Receipts from abroad	86,722	87,550	90,447	95,522	103,064	Disposal of receipts	86,722	87,550	90,447	95,522	103,064

CHAPTER IV

The Sector Accounts for British Guiana, 1956.

Thirteen sector accounts are presented in this chapter. The sectors follow the classification of industries shown in Table 5 but some industries are amalgamated in the sector accounts. This was done for two reasons: firstly, because it is considered that thirteen is the maximum number of sectors desirable without making the table unwieldy, and secondly, because the inclusion of details of some industries in sector account form would disclose information which may be considered of a confidential nature to some industrial firms.

The industries were amalgamated in the following way to form sectors. Sugar cane, rice, coconut and crops form the Agricultural Sector, livestock forms the Livestock Sector, forestry, fishing and mining form the Extraction Sector, processing and manufacturing form the Processing and Manufacturing Sector, engineering and construction form the Engineering and Construction Sector, distribution, transport, communications and finance form the Commerce Sector, professions, catering, personal service and entertainment form the Service Sector, rent of dwellings forms the Rent Sector, and government forms the Government Sector. The last four sectors — Capital Sector, Overseas Sector, Households Sector and Profits Sector — do not of course follow from the industrial classification in Table 5. They are necessary to show in sector form the direction of all transactions in the economy. The practice adopted in this set of sector accounts has been to allocate all profit income to a sector called the "Profit Sector." The value of this method is that it is then possible to show the disposal of profits as between households income, overseas payments, taxes and saving. Saving out of profit incomes plus other forms of saving and borrowing are shown as receipts in the Capital Sector. This sector is thus uniform with the Capital Formation Account (Account 3). The Profit Sector however shows more breakdowns of profit allocation than are available from the national accounts. It does not however discriminate between incorporated and unincorporated profit.

The matrix (Table 4) integrates the sector accounts in matrix form. This table not only gives a picture of the economy in one table but it does away with the necessity to number separately the items in the sector accounts for the purpose of articulating them. The matrix is a summarized version of the work sheets which provided the basic material for all the accounts and tables in this study.

The thirteen sector accounts have been elaborated slightly from the usual pattern so that some descriptive material could be included. This gives details of the main transactions only. It serves as a guide to the pattern of trans-

actions but it omits to detail a number of smaller transactions which are included in the figures.

SECTOR ACCOUNTS, 1956

1. Agricultural Sector

Receipts from			*Payments to*		
Sector	Mainly for:	$000	Sector	Mainly for:	$000
Livestock	Feeding stuffs	1,150	Extraction	Fish manure, timber	211
Processing and manufacturing	Sugarcane, padi, coconut, etc.	32,776	Processing and manufacturing	Rice mills fees	1,139
Commerce	Goods for resale	11,825	Construction	Maintenance and hire	2,400
Government	Transfers	334	Commerce	Purchases and transport	6,949
Capital	Stock change	60	Services	Advisory etc.	20
Overseas	Direct exports	400	Government	Indirect taxes, rents	405
Households	Direct purchases & non-cash production	5,059	Overseas	Direct imports	2,671
			Households	Wages and salaries	19,281
			Profits	Profit: gross	18,548
		51,624			51,624

2. Livestock Sector

Receipts from			*Payments to*		
Sector	Mainly for:	$000	Sector	Mainly for:	$000
Processing and manufacturing	Food processing	20	Agriculture	Feeding stuffs	1,150
Commerce	Goods for resale	4,227	Construction	Maintenance etc.	70
Overseas	Direct exports	3	Commerce	Purchases	489
Households	Direct purchase and non-cash production	1,881	Government	Rents, taxes	70
			Households	Wages and salaries	1,342
			Profits	Profit: gross	3,010
		6,131			6,131

3. Extraction Sector

Receipts from			*Payments to*		
Sector	Mainly for:	$000	Sector	Mainly for:	$000
Agriculture	Timber, fish manure	211	Construction	Maintenance	2,689
Processing and manufacturing	Wood, gold, etc.	1,089	Commerce	Purchases	4,779
Construction	Timber	3,001	Government	Royalties, taxes	2,128
Commerce	Goods for resale (mainly timber)	7,064	Overseas	Direct imports (mining coys.)	2,849
Capital	Stock change	−1,015	Households	Wages and salaries	11,882
Overseas	Direct exports: bauxite, gold, timber	34,922	Profits	Profits: gross	22,103
Households	Direct purchase and non-cash fish	1,158			
		46,430			46,430

SECTOR ACCOUNTS, 1956

4. Processing and Manufacturing Sector

Receipts from			*Payments to*		
Sector	Mainly for:	$000	Sector	Mainly for:	$000
Agriculture	Rice mills fees	1,139	Agriculture	Sugar cane, padi, coconuts, etc.	32,796
Commerce	Goods for resale and rice for export	25,012	Livestock	Meat processing, etc.	20
Services	Goods for catering etc.	65	Extraction	Wood, gold, etc.	1,089
Government	Purchases (printing etc.)	152	Construction	Maintenance	1,804
Capital	Stock change	593	Commerce	Purchases of fuel etc.	4,425
Overseas	Direct exports (sugar and rum)	43,568	Services	Advisory, etc.	12
Households	Direct purchases (including electricity)	4,490	Government	Direct taxes etc.	563
			Overseas	Direct imports	11,006
			Households	Wages and salaries	14,990
			Profits	Profit: gross	8,314
		75,019			75,019

5. Engineering and Construction Sector

Receipts from			*Payments to*		
Sector	Mainly for:	$000	Sector	Mainly for:	$000
Agriculture	Maintenance and hire	2,400	Extraction	Timber	3,001
Livestock	Maintenance and hire	70	Commerce	Purchases (including some imports)	14,800
Extraction	Maintenance	2,689	Services	Architects etc.	75
Processing and manufacturing	— do —	1,804	Government	Indirect taxes, etc.	1,395
Commerce	Maintenance (mainly transportation)	2,797	Overseas	Direct imports	21,290
Services	Maintenance	70	Households	Wages and salaries	13,471
Rent of Dwellings	— do —	3,891	Profits	Profit : gross	7,997
Government	Maintenance (by private contractors)	258			
Capital	Additions and replacements of assets	48,000			
Households	Maintenance of durable goods (cars, radios)	50			
		62,029			62,029

6. Commerce Sector

Receipts from			*Payments to*		
Sector	Mainly for:	$000	Sector	Mainly for:	$000
Agriculture	Purchases and transport	6,949	Agriculture	Goods for resale	11,825
Livestock	—do—	489	Livestock	—do—	4,227
Extraction	—do—	4,779	Extraction	Timber, fish for resale	7,064
Processing and manufacturing	—do—	4,425	Processing and manufacturing	Goods for resale	25,012
Construction	—do—	14,800	Construction	Maintenance (mainly transportation)	2,797
Services	—do—	1,454			
Rent of dwellings	Materials purchased	880	Rent of dwellings	Insurance claims	410
Government	Direct purchases	2,368	Government	Indirect taxes	18,883
Capital	Change in stocks	454	Overseas	Direct imports	58,723
Overseas	Goods marketed for export	17,886	Households	Wages and salaries	20,167
Households	Purchases by consumers	122,608	Profits	Profit: gross	27,984
		177,092			177,092

SECTOR ACCOUNTS, 1956

7. Services Sector

Receipts from			*Payments to*		
Sector	Mainly for:	$000	Sector	Mainly for:	$000
Agriculture	Professional, advisory	20	Processing and manufacturing	Goods	65
Processing and manufacturing	—do	12	Construction	Maintenance	70
Construction	—do—	75	Government	Entertainment tax, etc.	549
Government	—do—	92	Commerce	Purchases	1,454
Households	Professional, catering, entertainment and domestic service	7,862	Overseas	Direct imports	20
			Households	Wages and salaries	3,168
			Profits	Profit: gross	2,735
		8,061			8,061

8. Rent-of-Dwellings Sector

Receipts from			*Payments to*		
Sector	Mainly for:	$000	Sector	Mainly for:	$000
Commerce	Insurance claims	410	Construction	Maintenance	3,891
Government	Rent of quarters	38	Commerce	Materials, etc.	880
Households	Actual and imported, rent	11,232	Government	Rates and taxes	1,439
			Profits	Profit: gross	5,470
		11,680			11,680

9. The Government Sector

Receipts from			*Payments to*		
Sector	Mainly for:	$000	Sector	Mainly for:	$000
Agriculture	Indirect taxes, rents	405	Agriculture	Transfers	334
Livestock	—do—	70	Processing and manufacturing	Purchases	152
Extraction	Royalties, taxes	2,128	Construction	Maintenance (private contract)	258
Processing and manufacturing	Indirect taxes, etc.	563	Commerce	Purchases and subsidy to transport	2,368
Construction	—do—	1,395	Services	Services, professional	92
Commerce	—do	18,883	Rent	Rent of quarters	38
Services	Entertainment tax, etc	549	Capital	Saving	4,753
Rent of dwellings	Rates and taxes	1,439	Overseas	Direct imports and transfers	4,539
Overseas	Transfers	1,423	Households	Wages, salaries, and transfers	30,457
Households	Direct taxes etc.	4,636			
Profits	Direct Taxes	11,500			
		42,991			42,991

10. The Capital Sector

Receipts from			*Payments to*		
Sector	Mainly for:	$000	Sector	Mainly for:	$000
Government	Saving	4,753	Agriculture	Stock changes	60
Overseas	Grants and net borrowing	15,180	Extraction	—do—	−1,015
Households	Saving: non-profit income	3,152	Processing and manufacturing	—do—	593
Profit	Saving: gross saving from profit income (incorporated and non-incorporated)	25,007	Commerce	—do—	454
			Construction	Replacement and additions to assets	48,000
		48,092			48,092

SECTOR ACCOUNTS, 1956

11. The Overseas Sector

Receipts from			*Payments to*		
Sector	Mainly for:	$000	Sector	Mainly for:	$000
Agriculture	Direct imports	2,671	Agriculture	Direct exports	400
Extraction	— do —	11,006	Livestock	— do —	3
Processing and manufacturing	— do —	2,849	Extraction	— do —	34,922
Construction	— do —	21,290	Processing and manufacturing	— do —	43,568
Commerce	— do —	58,723	Commerce	Exports marketed	17,886
Services	— do —	20	Government	Transfers	1,423
Government	Imports and transfers	4,539	Capital	Grants and net borrowing	15,180
Households	Direct imports, remittances etc	3,156	Households	Remittances etc.	1,973
Profit	Net factor incomes	11,101			
		115,355			115,355

12. The Household Sector

Receipts from			*Payments to*		
Sector	Mainly for:	$000	Sector	Mainly for:	$000
Agriculture	Wages and salaries	19,281	Agriculture	Direct purchases	5,059
Livestock	—do—	1,342	Livestock	—do—	1,881
Extraction	—do	11,882	Extraction	—do—	1,158
Processing and manufacturing	—do—	14,990	Processing and manufacturing	—do—	4,490
Construction	—do—	13,471	Construction	Maintenance durable goods	50
Commerce	—do—	20,167	Commerce	Direct purchases	122,608
Services	—do—	3,168	Services	Professional, domestic, entertainment and catering	7,862
Government	Wages, salaries, transfers	30,457	Rent of dwellings	Actual and imputed rent	11,232
Overseas	Remittances etc.	1,973	Government	Direct taxes: purchases	4,636
Profit	Distributed profit	48,553	Capital	Saving non-profit income	3,152
			Overseas	Direct imports: remittances	3,156
		165,284			165,284

13. The Profits Sector

Receipts from			*Payments to*		
Sector	Mainly for:	$000	Sector	Mainly for:	$000
Agriculture	Gross profit	18,548	Households	Distributed profit	48,553
Livestock	—do—	3,010	Government	Direct taxes on corporations	11,500
Extraction	—do—	22,103	Overseas	Income on overseas capital	11,101
Processing and manufacturing	—do—	8,314	Capital	Gross saving from profit incomes	25,007
Construction	—do—	7,997			
Commerce	—do—	27,984			
Services	—do—	2,735			
Rent	—do—	5,470			
		96,161			96,161

TABLE 4. TRANSACTIONS MATRIX FOR 13 SECTORS, 1956. ฿ Thousand

Payments to:	*Receipts from:* Agriculture	Livestock	Extraction	Processing and manufacturing	Engineering and construction	Commerce	Services	Rent dwellings	Government	Capital	Overseas	Households	Profits	Total
Agriculture		1,150		32,796		11,825			334	60	400	5,059		51,624
Livestock				20		4,227					3	1,881		6,131
Extraction	211			1,089	3,001	7,064				-1,015	34,922	1,158		46,430
Processing and manufacturing	1,139					25,012	65		152	593	43,568	4,490		75,019
Engineering and construction	2,400	70	2,689	1,804		2,797	70	3,891	258	48,000		50		62,029
Commerce	6,949	489	4,779	4,425	14,800		1,454	880	2,368	454	17,886	122,608		177,092
Services	20			12	75				92			7,862		8,061
Rent dwellings						410			38			11,232		11,680
Government	405	70	2,128	563	1,395	18,883	549	1,439			1,423	4,636	11,500	42,991
Capital									4,753		15,180	3,152	25,007	48,092
Overseas	2,671		2,849	11,006	21,290	58,723	20		4,539			3,156	11,101	115,355
Households	19,281	1,342	11,882	14,990	13,471	20,167	3,168		30,457		1,973		48,553	165,284
Profits	18,548	3,010	22,103	8,314	7,997	27,984	2,735	5,470						96,161
Total	51,624	6,131	46,430	75,019	62,029	177,092	8,061	11,680	42,991	48,092	115,355	165,284	96,161	905,945

PART II

CHAPTER V

Gross Domestic Product

Definition of Sectors

The economy has been divided into industries for the purposes of Table 5 (Gross Domestic Product at factor cost by industrial origin). The industries have the following coverage.

Sugar cane includes growing, harvesting and transport of all cane whether grown by estates or farms. A description of the method of deriving this figure is given on p. 28.

Rice includes the growing of padi and excludes incomes accruing to millers and transportation of rice. Some rice farmers sell their rice after milling, however, and any extra incomes accruing from this method of selling (less rice milling costs), are included in the rice industry.

Coconut products produced on farms have been included. Thus practically all copra and a part of the oil produced are included, as well as the income from nuts sold whole or consumed locally.

Crops include coffee, cocoa, bananas, other fruit, ground provisions, corn, pulses and vegetables.

The livestock industry includes all income from cattle, goats, pigs, poultry, dairy, honey and beeswax.

The forestry industry includes all timber production from the extraction to the exporting or final selling stage. Although there are arguments in favour of separating sawmilling, and including this industry with processing, it was not in fact found possible to do this owing to the number of firms participating in both parts of the industry. Rubber and balata were also included in the forestry industry.

Fishing covers all offshore and freshwater fishing including the non-cash production (as with other primary products listed above).

Mining includes bauxite, (which accounts for over 80 per cent of the total value) gold, diamonds, stone and sand quarrying. Prospecting and exploring is for the most part covered under construction and engineering except when production is actually taking place.

The processing sector includes the following industries only: (a) the production of milled sugar, rum, and other associated products, (b) rice milling, and (c) the production of soap, coconut oil and other vegetable oil products.

The manufacturing group includes the following industries: electricity, printing, furniture making, fruit canning, drugs and chemicals, oxygen and

TABLE 5. INDUSTRIAL ORIGIN OF G.D.P. AT FACTOR COST, 1952-56

	1952		1953		1954		1955		1956	
	$000	%	$000	%	$000	%	$000	%	$000	%
Sugar cane	21,723	13.60	21,950	12.41	20,304	10.53	18,434	9.57	21,511	10.34
Rice farms	10,050	6.29	9,082	5.13	11,974	6.21	9,737	5.05	8,807	4.23
Coconut	1,940	1.21	2,636	1.49	3,006	1.56	3,013	1.56	2,598	1.25
Crops	5,361	3.36	5,502	3.11	5,825	3.02	4,552	2.36	4,913	2.36
Livestock	6,005	3.76	6,239	3.53	4,595	2.38	6,017	3.12	4,352	2.09
Forestry	4,220	2.64	4,411	2.49	4,376	2.27	4,131	2.14	5,297	2.55
Fishing	2,512	1.57	3,322	1.88	4,322	2.24	5,504	2.86	5,180	2.49
Mining	13,775	8.62	20,011	11.31	24,517	12.72	19,112	9.92	23,508	11.30
Processing	17,343	10.86	21,775	12.31	17,882	9.28	19,754	10.25	16,724	8.04
Manufacturing	6,068	3.80	5,065	2.86	6,110	3.17	6,269	3.25	6,580	3.16
Construction	9,950	6.23	10,921	6.17	16,110	8.36	18,501	9.60	21,468	10.32
Distribution	20,830	13.04	24,000	13.57	28,227	14.64	29,001	15.05	30,459	14.64
Transport: road	4,939	3.09	5,302	2.99	5,795	3.01	6,384	3.31	6,626	3.19
Water, rail, wharves	4,491	2.81	4,855	2.74	4,127	2.14	4,969	2.58	6,485	3.12
Air and communications	434	0.27	584	0.33	510	0.26	530	0.28	562	0.27
Finance and insurance	3,910	2.45	5,081	2.87	5,110	2.65	4,960	2.57	4,019	1.93
Professions	2,410	1.51	2,456	1.39	2,929	1.52	3,210	1.67	3,445	1.66
Catering	327	0.20	509	0.29	675	0.35	550	0.29	554	0.27
Personal service and entertainment	998	0.62	1,019	0.58	1,311	0.68	1,750	0.91	1,904	0.91
Rent of dwellings	6,111	3.83	5,430	3.07	5,275	2.74	5,410	2.81	5,470	2.63
Government	16,356	10.24	16,766	9.48	19,771	10.27	20,881	10.85	27,555	13.25
Total	159,753	100.00	176,916	100.00	192,751	100.00	192,669	100.00	208,017	100.00

acetylene, bakery products, leather making, handicrafts, jewellery manufacture, tailoring and apparel and a number of minor industries.

Engineering and construction includes all building and construction, ship and boat building, construction of bus bodies and other capital items. All branches of the repair industries such as repairs to vehicles, bicycles, radios etc. are included, although in some industries such as sugar making this type of work is done by maintenance staffs whose incomes could not be separated. Public Works are considered as a product of this sector. Exploration and prospecting done by mining companies are also included.

Distribution includes retail and wholesale distribution, commission and travel agencies, film distributors and marketing organizations.

Transport industries include buses, taxis, trucks, vans and animal drawn vehicles (exclusive of vehicles owned and operated on farms or by firm and not used for hire outside). Water transport includes all heavy good transported by water and rail, passenger transport by rail and water, wharfage, storage (when not covered by distribution firms or producers), stevedoring, and sea-going shipping, if registered in British Guiana. Air and communications include airlines (local) and Cable and Wireless. (Post Office wages and salaries are however included under government).

The finance industries include banks, insurance companies, savings banks, credit institutions and real estate, but private lending for productive purposes has not been separated from the profit of the industry concerned, whilst consumer loans have been omitted altogether.

Professional services include doctors, dentists, paid employees of religious organizations, teachers (excluding government), lawyers, estate agents, architects and other professions.

Catering includes clubs, hotels, cafés, restaurants, but does not include rum shops, which mainly sell spirits for removal from the premises and which are thus included in the distribution sector.

Personal services and entertainment include domestic services, laundries, undertakers, hairdressers, cinemas, sports and fairs and private entertainers.

Rent of dwellings includes an actual or imputed rent for all occupied dwellings, whether owner-occupied or tenanted.

Government includes all current expenditure of local and central government on wages and salaries and net profit of government undertakings and income from government property.

The sources of information regarding output and incomes were as far as possible independent. In sugar and bauxite for instance it was possible to obtain income and output data independently. In some industries however, the distinction is not so valid. In professional services for instance, it is not easy to measure output except in income terms. On the whole, however, it can be claimed that the sources for the gross domestic product were mainly of an "output" type whilst those for national income were mainly "income" sources. The equating of the tables was finally achieved by checking and comparing the sources until a best estimate was arrived at.

Sources of gross domestic product are discussed below under industrial groupings.

Sugar Cane

Sugar cane growing is treated as an agricultural activity, whilst the production of rum, milled sugar and molasses is considered to be a processing industry. This distinction means that values have to be allocated as between growing and milling. The values are inevitably somewhat artificial in view of the fact that sugar in British Guiana is, in the main, milled on the estate where it is grown. As most sugar plantations distinguish between field operations and factory operations in their accounts however, it is possible to make this estimate, which has some value in that it shows the relative importance of the primary sector of the industry which has a wage bill roughly 25 per cent greater than the processing stage. Any imputation of profits from he primary as distinct from the secondary stage would be artificial as the revenue" of the primary part of this industry has been arrived at by evaluation of cane output by prices paid to small farmers. This method is of course subject to the criticism that only a very small part of the total output is produced by small farmers. No other cane price is however available and to impute a different price would only alter the total figures in that a small amount would be transferred as between gross domestic product from agriculture and that for processing. The Department of Agriculture made available data on the output of cane by estates and by small farmers which are shown in Table 6.

TABLE 6. CANE OUTPUT, 1952-56.

	Tons				
	1952	1953	1954	1955	1956
Estates	2,620,045	2,705,858	2,611,963	2,657,685	2,785,330
Farmers	31,690	33,988	41,621	36,824	34,999

The price paid to farmers for the small quantity of cane produced by them was as follows:

TABLE 7. PRICE PAID FOR FARMERS' CANE

	$ per Ton				
	1952	1953	1954	1955	1956
Spring crop	9.02	8.73	9.27	9.00	9.60
Autumn crop	9.15	9.82	9.00	8.87	9.40

Costs of production under broad headings were obtained from sugar estates. The Labour Department provided statistics of total wages paid in sugar, showing the division between field and factory labour. Total wages and salaries on the cane producing side of the industry are shown in Table 8.

TABLE 8. APPROXIMATE SALARIES AND WAGES (INCLUDING BONUSES) IN SUGAR CANE PRODUCTION

	$ 000				
1952	1953	1954	1955	1956
11,700	11,699	13,650	13,770	14,193

Information on outlays obtained from the sugar companies indicated that the main goods imported were fertilizers, bags and insecticides and weed killers. The main local expenditure of this sector was in the transport and repairs and maintenance industries. It must, however, be remembered that transport and maintenance supplied by the sugar companies themselves are included under cane production (if transportation of cane) and under processing, (if concerned with the processing stages). It is because the sugar industry is fairly self-sufficient in these services that outlays to other sectors appear small, but of course the industry maintains staffs employed in these services as well as purchasing them, to a lesser extent, from outside firms.

Rice Farms

For the rice growing industry sources of information were the Rice Marketing Board (*22*), the Department of Agriculture (*2, 3, 4*) and a farm costing study undertaken in 1957 (*19*). The growing of rice was considered as a sector separate from milling and marketing. The quantity of padi delivered to mills and estimates of the quantity used on farms for seed and stockfeed are shown in Table 9.

TABLE 9. OUTPUT OF PADI

	Padi delivered to mills, Tons	Estimated quantity of padi for seed and stockfeed, Long Tons
Crop year ending 30.9.52	98,947	12,161
– do – 30.9.53	110,110	16,609
– do – 30.9.54	106,219	18,766
– do – 30.9.55	129,653	14,930
– do – 30.9.56	112,355	–

Valuation of rice output was complicated by the fact that in some areas of the country farmers sell rice to the Rice Marketing Board after having paid fees to millers, whilst in other parts of the country, padi will be sold outright by the farmer to the miller. The sector "rice-growing" is thus in a sense the "rice farms" sector. In other words income received is on account of all padi and some rice. This would seem a less artificial division of sectors than to have a "padi" sector and a "rice" sector. In any case, most of the value added by millers is included in the "processing" sector and the use of this particular sector division affects the pattern of outlays to some extent but has a very small effect on the allocation of values between the two sectors in the estimates of gross domestic product.

Rice sector receipts are total receipts of the rice farms. Outlays were arrived at by "blowing up" the results of a costing survey undertaken in 1957. These results were blown up by strata, but as many strata were badly represented, checks were made against information on farm outgoings made in the Department of Agriculture.

For a further description of the methods and sources used in arriving at rice values see report of rice farms survey undertaken in 1957 (*19*).

The complications arising from the discrepancy between the crop year and the calendar year were carefully considered. It did not seem desirable to "graft" one quarter of each year's value on the figures for three quarters of the previous year's values. Finally, it was decided to adjust physical production figures to the calendar years and to associate all values to the value of this production. This enables conformity to be reached with the end-of-the year inventory figure. Fortunately figures for end-year stocks were available from the Rice Marketing Board. Most of the income accruing from the rice harvest of one year is disbursed in the following year, so that the poor harvest of 1954 influenced income and expenditure in 1955.

Other Crops

A variety of sources was used in the computation of value for other crops. In coconut and coconut products the only published figures available were those from the Department of Agriculture. These were based on census and sample survey returns. Further estimates were however available in the form of copra and oil purchases by milling firms. Adding these estimates to estimates of home consumption it appears that the Department of Agriculture estimates were on the low side for most years. On the basis of the data available the following estimates of total production were made:

TABLE 10. COCONUT PRODUCTION

	Million Nuts				
	1952	1953	1954	1955	1956
Nuts consumed on farm	22	24	23	23	22
Nuts made into copra or oil	40	38	41	41	38
Whole nuts sold	12	11	13	13	14
Total	74	73	77	77	74

Most of the copra is made on farms, both smoke drying with kilns and sun drying being practised. Some oil is also made on farms. The primary stage of coconut production includes all farm activities. This means that oil made on farms is considered under the primary sector and oil and other products made in mills is considered with the processing sector. Ex-farm prices are shown below. These were applied to the relevant quantities above to obtain ex-farm values.

TABLE 11. PRICES OF COCONUT PRODUCTS

	1952	1953	1954	1955	1956
Whole nuts ($ per 000)	38.85	38.85	40.72	40.07	39.13
Copra ($ per lb.)	.12	.12	.12	.12	.12

The pattern of outlays for coconut production was available for a few larger farms. The pattern of costs does not vary greatly, but paid labour, which is an important cost of production on estates, is negligible in small plantings. The estimates of output and costs of production for this crop are not however, considered to be of particularly high reliability. A coconut costing survey for estates has been planned and this should be supplemented

with data relating to small holdings on which production conditions are very different.

For other crops, much use was made of the sample surveys of agricultural output which were undertaken by the Department of Agriculture in 1952, 53, 54 and 56 *(2, 3, 4, 10)*. The analysis of the later surveys had been held up for some time and final figures did not become available until 1958. For the 1956 survey results were based on a sample of the holdings actually enumerated. The accuracy of some of the final results was questionable and all in all it was felt that considering the expenditure of money and effort which had been involved, the statistics were disappointing in the light of national income needs. The Agricultural Census planned for 1961 will, if it is well enumerated, be of immense value to national income estimates and should strengthen the weaker sectors such as production of fruit, vegetables and ground provisions. Some reasonably good figures of output for main crops were available for 1952 and 1956 and are shown in the table below.

TABLE 12. PRODUCTION OF CROPS, 1952 and 1956

		1952	1956
Coffee	000 lb.	757	626
Cocoa	000 lb.	107	120
Oranges	000 lb.	2,128	
Grapefruit	000 lb.	438	3,740
Limes	000 lb.	588	
Other citrus	000 lb.	726	
Bananas	000 bunches	396	360
Pineapples	Numbers	509	600
Other fruit	000 lb.	5,179	6,372
Cassava	000 lb.	36,218	29,961
Eddoes			17,438
Yams			305
Sweet potato			289
Tannias			385
Corn	000 lb.	1,799	1,815
Plantain	000 bunches	775	769

Most of the above crops are grown on small farms and the outlays to other sectors are small. Little information was available regarding the production costs of these crops as no recent costing surveys have been done. Factor payments (wages, rent, interest and profit) are however estimated at 81 per cent of sales revenue. Paid wages account for less than one quarter of this amount and returns to family labour cannot be separated from profit. Family labourers are considered as having a share in profit rather than as receiving a wage. The outlays to other sectors, which are very small, are mainly on account of transport and purchases of tools and other agricultural supplies.

Livestock

The data for livestock production were slightly more reliable and the estimated volume of production is shown in Table 13.

TABLE 13. VOLUME OF LIVESTOCK PRODUCTION, 1952-56

		1952	1953	1954	1955	1956
Beef	tons	2,400	2,600	1,100	1,809	1,911
Milk	000 gals.	2,150	2,382	2,970	3,951	3,983
Hides and skins	No.	1,500	1,750	950	1,011	1,500
Pork, mutton etc	tons	711	650	700	725	750
Poultry	tons	325	300	300	320	320
Eggs	000 doz.	651	550	500	450	450

The figures for meat products are based on information given by the Department of Agriculture. Figures for eggs and milk were however, found to differ widely in the several surveys made between 1952 and 1956 and the above figures are thus broad estimates based on both production and consumption estimates. The evaluation also includes a broad estimate for butter, cream and ghee.

Beef production is a ranching industry in British Guiana. Family labour is thus less important and paid labour more important than in crop production. The following table shows the head of livestock in the country.

TABLE 14. HEAD OF LIVESTOCK, 1952 AND 1956

000 Head	1952	1956
Cattle	184	167
Pigs	25	22
Sheep	43	39
Goats	12	13
Poultry	443	565
Horses	3	4
Mules and donkeys	9	7

The source of information for livestock estimates was thus mainly Department of Agriculture surveys and figures of slaughterings. Owing to the distance between the Rupununi and other centres, considerable payments are made by beef production to the transport sector. This includes air freight of carcases from the interior to the coastland.

Forestry

The Forestry Department kept useful statistics of the extraction of commercial timber and other products *(12)*. Some estimating still had to be done for firewood and other home-used timber which was likely to have been missed in these computations. The volume of output of forest products is shown in Table 15.

The quantities were evaluated by prices shown in the annual reports of the Forestry Department. As the Forestry Department figures relate mainly to logs and roundwood, a further value estimate was added to arrive at the value of sawmill outturn. This was based on costing data derived from inland revenue total. The total sales revenue of the industry as estimated is shown in Table 16 which also indicates the outgoings to other sectors for one year (1956). Part of the transport facilities, particularly boats, are

TABLE 15. OUTPUT OF FOREST PRODUCTS, 1952 and 1956

		1952	1956
Timber: Logs			
Greenheart	000 cu. ft.	2,615	3,269
Crabwood	" " "	479	966
Mora	" " "	365	292
Wallaba	" " "	89	136
Others	" " "	1,019	1,137
		4,567	5,800
Roundwood	000 linear feet	960	1,199
Vat staves	linear feet	27	38
Splitwood staves	000	5,891	2,902
Firewood and charcoal	tons	109,545	175,111
Balata, gums, barks	000 lb.	1,200	948
Orchids	number	13,271	–

owned by the forestry firms, so that their value contribution is already included under forestry and is not a payment to the transport sector.

TABLE 16. SECTOR ACCOUNT FOR FORESTRY, 1956

Receipts	$ 000	Payments	
From Agriculture and fishing	231	To Engineering, etc.	642
Mining	200	Distribution	1,011
Processing and manufacturing	585	Road transport	250
Engineering and construction	3,001	Water, rail wharves	1,200
Distribution	1,243	Air and communications	25
Transport	200	Government	467
Households	350	Wages and salaries	3,100
Overseas	3,850	Profits (and Stock change)	2,965
Total receipts	9,660	Total payments	9,660

Most forestry exports are assumed to go straight to overseas buyers rather than through the hands of distributors. Distributors, however, purchase timber for sale on the local market. The receipts from agriculture, fishing and mining and transport are an account of direct payments made for mining props, boat and wharf repairs and such items.

Fishing

The information for fishing values was of a rather dubious accuracy. Estimates of catches were available from the Fisheries Division of the Department of Agriculture, but it was not easy to arrive at an estimate of fish caught and consumed by individuals. The Fisheries Division figures show a very marked increase in production during the period, but this may well be due to a wider coverage of the statistics. There is however, evidence that fish consumption has increased during the last few years. Estimates of production quantities and values are shown below.

The value of non-cash fish is included in these tables and is valued at producers' prices. The estimate of fish consumed is considerably higher than the estimates made for the Family Budget Survey in 1956. The figure in this survey is however believed to be too low (see p. 60).

TABLE 17. PRODUCTION OF FISH, 1952 and 1956.

	1952		1956	
	Quantity 000 lb.	Value $000	Quantity 000 lb.	Value $000
Fish landed in Georgetown coasts and estuaries	3,437	860	7,402	2,591
Deep sea	105	20	100	30
Fish landed: other parts of coast	1,891	598	4,212	1,476
Shrimps, etc.	72	16	75	18
Inland, canals, etc.	3,400	977	7,500	2,319
Total	8,905	2,471	19,289	6,434

Methods of Estimation for Agriculture

It will be observed from the above notes on agricultural production that the method *(18)* generally followed in arriving at estimates for primary products can be divided into three processes:

(a) Estimation of the physical product by quantity.

(b) Evaluation by growers' price.

(c) Estimation of pattern of out-goings.

The primary source of agricultural data is essentially survey and census material. In some surveys the product of farms is valued at the time of taking the survey. Generally, however, census material provides information on physical quantities of output which can then be valued at current ex-farm prices. As regards the needs of national income statistics, it is strongly felt that the best contribution which censuses and surveys can make is to provide accurate comprehensive data of physical production. Information on ex-farm prices and on the pattern of costs can best be obtained from supplementary surveys which need cover a much smaller sample of farms but which may require more skilled enumeration. Physical quantities of output are sometimes estimated directly from questioning farmers regarding their economic activities during the past period. Another method is to make estimates of total acreages, multiplying the results by approximate average yields. This can be done by the ex-post method of taking known yields after the crop is harvested or by the ex-ante method of forecasting yields from standing crops. The latter has the advantage that estimates may be available sooner than in the ex-post method but it is subject to errors not only of the usual statistical nature but also to the errors arising from unskilled forecasting and unforeseen occurrences between forecasting and harvesting. On the whole greater accuracy is achieved by using the method of estimating acreages and applying ex-post average yields. Information on production totals from farmers can be used to supplement this material.

Products which must enter a processing stage such as sugar, rice, and to some extent coconut, are easier to measure. If output cannot be ascertained on the farm it can be measured at entry to the mill. Farm surveys are thus needed far more urgently to cover such products as vegetables, fruit and provisions on which data is less easily available. As regards non-cash foods and those concerned wholly with the domestic market, consumption surveys should supplement production surveys.

The reliability of the agricultural data thus varies greatly. For sugar, rice, beef and forest products the reliability is believed to be high. But owing to the lack of good surveys on food crops and smaller agricultural industries, the estimates for these sectors cannot be considered to be of such a reliable order.

In addition to published and official reports, information was obtained from the sugar companies and some other larger farmers. Additional information was also supplied by the Department of Agriculture and other government departments.

A part of agricultural production never enters the market but is consumed by growers. The estimates of non-cash production for 1955 are shown in Table 18. The products have been valued at ex-farm prices.

TABLE 18. NON-CASH PRODUCTION, 1955: EVALUATED AT EX-FARM PRICES

	$000
Rice	2,537
Coconut	276
Other crops	1,600
Livestock products	1,170
Fishing and firewood	646
	6,229

Mining and Quarrying

For these industries gross production figures were generally available *(16)* and are shown in Table 19.

TABLE 19. PRODUCTION OF MAIN MINERALS, 1952-56.

		1952	1953	1954	1955	1956
Bauxite	000 Long tons	2,387	2,275	2,310	2,435	2,481
Diamonds	000 Metric carats	38.3	35.3	30.1	33.3	29.1
Gold	000 Troy oz.	24.2	20.1	26.9	23.8	15.8

Besides these minerals, some manganese has been mined in more recent years. Stone, sand and gravel quarrying and a number of smaller mining activities are also included in the mining values shown in the main tables.

Sales values were arrived at as follows: for bauxite the export figure adjusted for stock change was used. The stock change was obtained from the direct enquiries to firms used in the capital formation estimates. Gold and diamond values were obtained from statistics published by the Lands and Mines Department. From the matrix (Table 4) it will be noted that total value of mining production in 1956 was 32 million dollars, of which bauxite accounted for 29 million and gold and diamonds for 2 million.

Figures relating to the pattern of outlays by firms were obtained by direct enquiries from the companies. Companies were asked to provide the figures for wages and salaries payment, total purchase of local goods, total payments to local contractors and value of imported goods (excluding capital). The Lands and Mines Department publishes figures showing the total timber purchases bought by mining companies from the forestry sector.

In British Guiana the mining sector is comparatively self-sufficient, that is to say, it is not greatly dependent on other sectors. Staff for servicing equipment are maintained at the mining sites and although some goods are purchased through local concerns the main bulk of purchases are imported directly. This position is illustrated in the matrix (Table 4). But it should be noted that profits are recorded as leaving the mining sector before payments of taxes, royalties and a few smaller allocations which remain in the territory.

Processing

The processing sector includes the processing of sugar products, coconut products and rice milling. For sugar, rum and molasses the information was obtained mainly from direct enquiries from the companies. As has been explained value for milling and other processing operations were analyzed separately from those for cane. Total final values of output were as follows:

TABLE 20. VALUE OF FINAL OUTPUT SUGAR PRODUCTS, 1952-56

	$000				
	1952	1953	1954	1955	1956
Sugar	43,108	42,828	41,720	43,178	44,019
Rum	2,212	2,615	2,821	3,314	3,864
Molasses	1,750	1,095	1,032	767	992

Having allocated certain costs of production to cane growing the remaining were allocated to milling etc. Details of some costs were obtained from sugar companies, others were obtained from the Department of Labour. Wages and salaries (including holiday bonuses etc.) were estimated as follows:

TABLE 21. WAGES AND SALARIES: SUGAR PROCESSING

	$000				
	1952	1953	1954	1955	1956
Wages, bonuses etc.	5,075	5,343	6,569	7,737	7,625
Salaries	1,250	1,321	1,450	1,600	1,619

The output of milled sugar for the years under review is shown below:

TABLE 22. PRODUCTION OF MILLED SUGAR, 1953-56.

	1953	1954	1955	1956
000 Long tons	241	239	250	263

Rice milling has been included in the processing sector. As has been explained, the allocation of receipts between millers and farmers means that part of the receipts for milled rice goes to farmers (when these farmers sell to the Rice Marketing Board). These farmers will pay mill fees which will be a receipt by the millers. When millers buy padi from farmers and sell milled rice to the Board, the receipt is a miller's receipt. The relationship of the various parts of the rice industry is shown in the results of the rice survey *(19)*. Totals for milled rice were obtained from the Rice Marketing

Board (*22*). The figures of total rice production, including rice milled but not sold to the Board but retained by producers for domestic use are shown in Table 23.

TABLE 23. TOTAL PRODUCTION OF MILLED RICE 1952-56.

	Long Tons				
	1952	1953	1954	1955	1956
Rice exported	31,197	36,807	38,536	48,494	41,990
Rice sold locally	16,852	17,608	17,725	18,428	19,734
Total rice marketed	48,049	54,415	56,261	66,922	61,724
Retained by producers	12,357	11,503	11,471	11,364	10,596
Total production	60,406	65,918	67,732	78,286	72,320

A few returns were available showing the cost pattern in some of the larger mills, and accounts for the two government owned mills were, of course, available. On the whole, it was however felt that, whereas the information on the receipts side was fairly reliable, the breakdown of production costs for rice milling was not based on such good data. The receipts, which include mainly receipts for rice sold and mill fees, were derived from information supplied by the Rice Marketing Board.

Coconut products were included under the processing sector. Here again the main dividing line was between production on the farm and in the factory (see coconut under agricultural products for details of information at the primary stages) so that oil milling done on farms would be included in primary production whilst that done in factories is included in processing. The manufacture of soaps, oils and other preparations is included under processing, and although it might be argued that certain of these products are finished manufactured goods, much of the production carried out in the same establishments are of an elementary processing nature and it was considered better to keep all vegetable oil products under the same head. Output for 1953-55 is shown in Table 24.

TABLE 24. OUTPUT OF VEGETABLE OIL PRODUCTS, 1953-55.

		1953	1954	1955
Edible oil	000 gals.	544.8	678.8	777.8
Crude oil	000 gals.	254.1	253.6	241.1
Soap	000 lbs.	3,287	3,959	4,123
Margarine etc.	000 lbs.	299.2	284.1	240.2
Meal	000 lbs.	3,234	3,234	3,914

There are a few small firms making oil of a crude kind but the greater part of these products are produced by larger firms who make tax returns. Amalgamated returns for ten larger processors showed the following pattern of costs in 1955:

TABLE 25. SALES AND EXPENSES: TEN VEGETABLE OIL PROCESSORS, 1955

		$000			
Sales and Stock Change	Purchases, Copra and Oil	Wages and Salaries	Fuel	Other	Net Profit
601	459	95	4	10	33

The cost pattern is essentially a simple one with purchases from producers constituting the most significant part of the outlays. A new modern factory for the production of margarine and compounds was established in 1956. Total receipts for the three industries under processing (sugar processing, rice milling and coconut) are shown in Table 26.

TABLE 26. RECEIPTS IN THE PROCESSING SECTOR, 1952-56

	$000				
	1952	1953	1954	1955	1956
Sugar, rum etc.	47,070	46,538	45,573	47,259	48,875
Rice Milling	3,892	4,190	5,374	5,627	4,844
Coconut	3,900	4,649	4,581	5,160	4,476

Manufacturing

A large number of industries are included in the manufacturing sector, including manufacture of foods, aerated drinks, cigarettes and matches, printing, jewellery, furniture, bricks, handicrafts, leather and electricity manufacture, the manufacture of footwear and apparel, and chemical products. The estimated value of sales in the main groups is shown in Table 27.

TABLE 27. VALUES OF OUTPUT: MANUFACTURING INDUSTRIES, 1952-56

	$000				
	1952	1953	1954	1955	1956
Bread, cakes, food and drink (except rum)	7,525	7,929	8,561	9,651	9,798
Printing	1,635	1,555	1,578	1,750	1,897
Wood, brick etc.	1,197	1,021	1,195	1,001	1,250
Other	2,661	3,151	3,452	3,809	4,246

Products for which amalgamated information was obtained from inland revenue records included printing, electricity, chemicals, biscuits, cigarettes and matches. Many of the other products are made by very small producers. This is particularly true of handicrafts, wood products, leather goods, bread and small food processing. Although there are one or two large tailors and a shirt factory, the making of shirts and apparel is also carried out by a large number of small producers. Thus, the estimates for this sector are, in part, rather unreliable, and it is not considered that sufficient information is available to permit an estimate to be made of the physical volume of output. For the industries in which firms are larger, however, it is considered that the statistics of factor incomes are fairly reliable as there were more ready checks on the income side in manufacturing, than in primary industries. Many of these manufacturing industries produce wholly for local consumption and checks on sales can be made from the consumers' expenditure side. About half the total value in this manufacturing sector is, however, of dubious reliability and can only be improved by means of a census of establishments. Even this would however, miss a large number of small manufacturers of handicrafts etc. Since 1957 a brewery has been started, but it was not functioning between 1952 and 1956.

Construction and Engineering

These two industries are included in one sector. All capital work and maintenance are included except when maintenance is carried out by staff employed by sugar or mining companies and by government. The sector includes a wide range of industries such as building construction, ship-building, drainage and land works, foundry works and maintenance of equipment and durable consumers' goods such as vehicles, refrigerators, electrical appliances, radios, etc. The structure of this sector is complex. Although there are a number of large firms in the building industry there are also many small contractors. The contractors are often contractors of gang labour and do not always provide materials. Government capital works are included in this sector but the only payment out of the current account is for work contracted to the private sector. Thus maintenance underaken by labour paid directly by government is included under Government Current Account.

Returns were available from some larger contractors but many of them showed labour costs only. House-building was thus estimated by a different method. The numbers of new houses erected were obtained from the health authorities, and from the Sugar Labour Welfare Board *(24)*. Statistics kept by the health authorities are supposed to cover all house building whether done under public schemes or by private individuals. The Sugar Labour Welfare Board and Housing Authorities showed statistics of total expenditure on house-building. For private building, however, some estimates of the costs of building houses of various sizes were obtained and were applied to the numbers.

In the matrix all expenditure on capital works is assumed to have been paid from the sector "Capital" to the sector "Construction and Engineering". This sector was then assumed to make the relevant purchases of imports. In regard to maintenance items, however, it was impossible to make such a clear distinction. Sugar companies carry out a great deal of maintenance to plant buildings and to land works, and it is impossible to distinguish this from other current expenditure. Maintenance carried out by government or by firms in specific sectors is thus left under that sector. If, however, they contract with outside firms, the amount is shown as paid to the construction and engineering sector. The value of maintenance work, as distinct from capital construction, was estimated at $14 million in 1956. Approximately $2 million of this was for maintenance of agricultural land, buildings, machinery etc. (excluding of course maintenance done by the industry itself); $3.8 million was attributable to house repairs. A small part, estimated at $50,000, was considered to have been paid directly by households for repairs of vehicles, wireless sets and other household equipment.

As regards the maintenance and repairs section of this industry, although returns were available from some of the larger businesses, there are also a large number of small businesses and part time workers in this sector. Only

a guess could be made of their earnings. The study of rice farmers' expenditure showed that one of their main items of expenditure is for repairs of machinery and tools and for machinery hire. Hire of machinery and tools is included in this sector.

Methods of Estimation for Secondary Industries

The data for secondary industries relied more on "income" sources and less on "output" sources than was the case for primary production. Big firms accounted for just over four-fifths of the total output of the processing and manufacturing industries and returns for these firms were considered to be fairly reliable. Nevertheless it must be admitted that data for the remaining fifth are very unreliable and further investigation might show the group of small businesses to be of greater importance than estimated. The amount of information collected on the volume of output of bigger firms was also meagre and it is suggested that in a future year a survey be done of manufacturing and processing enterprises which could include questions on volume of output and labour employed. This information would also be of value in estimating the real change in the national income.

Distribution

The method used for the distributive trades sector was basically to derive as much information as possible from aggregated tax records and to blow this up to a colony-wide basis by reference to licensing data.

Information collected from aggregated tax records was as follows: (a) sales and end of year stock; (b) expenditure on wages and salaries, rent, interest, insurance, fuel, purchases, miscellaneous expenditure, opening stock, net profit and tax paid. The method of abstraction used by the tax office was to head columns with these items and enter down the page a number of stores which could then be aggregated.

For one year, 1954, all returns for distributors were totalled. For the four other years however, one in five of the small stores was totalled. All incorporated business was totalled and all unincorporated businesses with a turnover of more than $250,000 per annum. The first step was thus to blow up the sample years to a figure based on the 1954 overall coverage. The second step was to blow up this overall coverage from inland revenue totals to a colony-wide coverage.

Aggregated tax records were available for approximately 550 retail businesses and 35 who were wholesalers only, importers or commission agents. The list of licensed business premises available from the licensing authorities shows that (including spirit shops) there were approximately 6,438 businesses registered as retailers in 1956. It is evident, however, that the 550 covered by tax returns include a major part of the total value and that the remaining firms are small. It was thus estimated that the average turnover for the remaining firms would be $10,000 per annum in 1956. This estimate, added to the aggregated tax records, provided a frame on which the re-

ceipts and expenditure pattern could be drawn up. Allowance was made for the fact that less paid labour and more family labour would be used in the small non-taxable enterprises. The matrix table for 1956 shows that the total receipts of the distribution sector were estimated at $159,091,000 for 1956. The share out of these receipts is shown in Table 28.

TABLE 28. SALES IN DISTRIBUTIVE TRADES, 1956

	Sales $ 000
Incorporated enterprises	31,021
180 Individual enterprises, sampled in 1956	29,561
373 Individual enterprises, estimate based on 1954 sample	26,500
5,658 Small non-taxable stores	56,580
Other small traders and dealers and hucksters	15,429
Total	159,091

Distributive data were subject to certain checks such as consumers' expenditure data, importations of goods passing through distributive channels and data of purchases from other sectors; payments from retailers to wholesalers are transactions within the sector and are not included in the total receipts figure, but value added by factors in the different stages appears of course in the gross domestic product at factor cost.

The checks indicated that the method used was fairly reliable. Figures on stock changes are also derived from taxation totals. The pattern of outgoings was found to be very consistent over a number of general stores. Table 29 shows some figures for 1954:

TABLE 29. PERCENTAGE ALLOCATION OF EXPENSES IN GENERAL STORES, 1954

	Berbice 12 Stores	Demerara 34 Stores	Essequibo 9 Stores	Total
Sales	88.7	83.7	86.8	85.5
Stock out	11.3	16.3	13.2	14.5
Receipts	100.0	100.0	100.0	100.0
Wages and Salaries	4.3	6.8	4.3	6.3
Rent	.1	.3	.1	.2
Interest	.2	.2	—	.2
Purchases	78.6	68.3	72.6	70.8
Other	.8	5.0	7.6	4.3
Stock in	12.3	16.0	13.3	14.9
Profit	3.7	3.4	2.1	3.3
Payments	100.0	100.0	100.0	100.0

In the incorporated businesses, wages and salaries were approximately 6 per cent of gross sales and net profit 4.2 per cent. It is felt that for the general stores presented in Table 29, there was a definite bias towards overstating wages and salaries and understating profit, although this may in fact take the form of claim made for the payment of family labour, who may (or may not) be actual recipients of money income.

Transport

The transport industries were divided into three main sections, road trans-

port, water and rail, including wharfage and stevedoring, and thirdly, air and communications.

The basic frame used for road transport figures was the list of registrations of vehicles for commercial use, which included buses, trucks and lorries, hire cars, and animal drawn vehicles. If vehicles were owned by businesses in other sectors and were operated only for the purpose of that business, they were included in the other sector and not the transport sector. The licensing lists showed valid registrations as in Table 30.

TABLE 30. NUMBER OF COMMERCIAL ROAD VEHICLES

	1952	1953	1954	1955	1956
Buses	75	76	78	102	83
Hire cars	1,245	1,345	1,425	1,242	1,327
Trucks and vans (not already included)	800	832	997	1,259	1,621
Animal drawn vehicles	2,750	2,750	2,694	2,407	2,149

Some totals were available from the aggregated tax statistics which showed the receipts and expenses of running individual vehicles. Those for buses were found to be fairly consistent. Figures for two larger bus companies were also included, so that the bus estimates were felt to be fairly reliable. There were three fairly large taxi companies and a large number of small operators. The operating costs and receipts of one average hire car were estimated from available accounts, but the figures are not felt to be as reliable as the bus estimates. The same method was applied to trucks. The estimate for animal drawn vehicles is based on the assumption that the turnover per annum was $1,200 in the town and $1,000 in the country. This may be a low estimate, but some operators may work part time only, or may already have been accounted for in other sectors. The values allocated in 1956 are shown in Table 31.

TABLE 31. RECEIPTS AND EXPENDITURE: ROAD TRANSPORT, 1956.

	$000					
	Receipts	Expenditure				
		Wages	Fuel	Fodder	Repairs and Purchases etc.	Profit
Buses	489	134	150		132	73
Hire cars	5,918	1,752	902		1,486	1,778
Trucks	2,516	992	664		350	510
Animal-drawn	2,744	134		456	1,054	1,100
Total	11,667	3,012	1,716	456	3,022	3,461

The water and rail transport industry includes the Transport and Harbour Department, stevedoring and wharfage and all water transport. Naturally an element of storage is included in the wharfage, but this is only a small part of the total storage facilities, the bulk of which will be included in the distribution sector.

Larger firms for which totals were available include Transport and

Harbour Department, the Demerara river service to Mackenzie, ships owned by the Pure Cane Molasses Company and registered in Georgetown and a number of smaller firms owning sloops, schooners, launches and motor vessels. As with road transport, boats owned and operated in another business were not included under transportation. Data for wharfage and stevedoring was also available as this service is performed mainly by the larger companies. As regards the smaller launch and boat services operated, mainly in the rivers of British Guiana, little information is available and there is no list of commercial boats as there is of commercial vehicles. It is thus considered that for this part of the water transport services figures are very unreliable. Totals were however available for 22 sloops or launches operating in the coastal or river trades and estimates of the pattern of outgoings were thus based on fairly reliable information. The total receipts for this sector were divided up as shown in Table 32.

TABLE 32. TOTAL REVENUES RAIL AND WATER TRANSPORT, 1955

	$000
Railways	946
Transport and Harbour steamer service	1,034
Harbour services	840
Private vessels	3,121
Wharfage etc.	496
Stevedoring	1,400
Total	7,837

There are two airlines operating, B.G. Airways and the government Grumman Goose service. Accounts were available for these services but unfortunately were not complete for 1956, so that a certain amount of estimating was unavoidable. Cable and Wireless have been included in this sector. Total receipts from the Post Office have been included, but owing to difficulties of distinguishing payments in the government accounts, it was necessary to transfer payments to the government sector. Post Office wages and salaries thus come under "government".

Finance

The financial sector includes the operations of insurance companies, banks, credit organizations, the Post Office Savings Bank and real estate dealers. Consumption loans which are considered simply as a transfer of consumers' expenditure, have been omitted from the accounts altogether. Where private loans have been made for productive purposes the interest is not separated from the profit of that sector. Bank interest is treated in a different way, as income of the financial sector. The factor incomes of banks include wages, salaries and profit and also interest paid by banks to depositors' accounts, which is, in fact, a form of distributed profit.

The treatment of insurance companies is not altogether satisfactory. Insurance companies are generally taxed more on the basis of their investment

income than on their premium income. Thus insurance companies are not required to make complete returns on their claims and premiums to the Income Tax Department. Some information was requested from insurance companies but it is evident that only the fullest returns would give the information required on a reliable basis. Profit for national income purposes is calculated simply as the difference between earnings on the receipts side and claims and local expenses on the payments side. This is clearly not altogether a satisfactory method of calculating profits as it means that the interest earnings of the local companies are included but not those of the expatriate companies.

It is quite usual for governments in more developed countries to obtain from banks and insurance companies fullest statistical information annually. Without these returns it is not possible to make reliable estimates for this important sector of the economy and much useful information on external monetary transactions is missing. It is strongly urged, therefore, that the necessary legislation be enacted to obtain annual statistical returns from financial intermediaries. The head offices of such concerns are accustomed to making these returns in such countries as the United Kingdom and Canada and it can in no way be considered an imposition if they are required to furnish relevant information to the governments of smaller countries in which they operate.

Services

The professional services sector includes a number of non-profit making institutions such as churches, nursing homes, charities. The sector also includes all doctors, dentists, lawyers, teachers, priests and members of some smaller professions. Individuals who are on full time government pay, such as government teachers and doctors, are not however included in this sector, but under "government". Thus private schools only are included. The allocation of receipts in 1956 was estimated as follows:

TABLE 33. ALLOCATION OF RECEIPTS: PROFESSIONAL SERVICES, 1956

	$000
Private doctors and dentists, nursing homes, etc.	998
Lawyers	750
Teachers (private) and schools	812
Religion and missions, welfare	800
Accountants and other professions	227
Total	3,587

The information for the catering sector is considered to be only of dubious reliability. A number of the larger hotels and restaurants made returns. Bars were included if these were of the type where liquor is usually consumed on the premises, but spirit shops were excluded. There are a large number of small parlours and eating houses for which only an estimate could be made. Receipts for lodgings are also included when board and lodgings are paid in together. Some hotels showed a lodgings account separately from

the bar account. The figures are not sufficiently reliable, however, to distinguish these items in the final estimates. The tourist trade in British Guiana is not yet of sufficient importance to justify special treatment.

Only domestic servants receiving pay are included in the personal service and entertainment sector. Thus, the majority of family workers are excluded. It was not difficult to find out the average pay of domestic servants from enquiries at the Labour Department, checked with a number of households. Including payments in kind, the estimated receipts were $600 per annum per servant in 1952 and 1953; $650 in 1954, $750 in 1955, and $800 in 1956. The estimates made in the D'Andrade and Percival Report *(9)* are believed to be on the high side. It must be remembered, although a large number of persons may take paid domestic work at some time during the year, that for these estimates the numbers must be translated into "servant years". Thus, the numbers are estimated as follows: 1952 = 1,300; 1953 = 1,400; 1954 = 1,500; 1955 = 1,650; 1956 = 1,875 and the values are thus ($000): 1952 = 780; 1953 = 840; 1954 = 975; 1955 = 1,238; and 1956 = 1,500.

The other values in this sector are attributable to laundries, undertakers, hairdressers and other personal services; also to cinemas, fairs, and other entertainment. Returns were available for some undertakers and laundries, but the estimates were subject to a great deal of guesswork. Totals were available for all cinemas. The low level of profit recorded for this sector is a result of losses being recorded by a number of the cinemas. It will be noted that servants' wages are recorded as payments by the "Personal services" sector, whilst all receipts are from households. Thus, no actual payments from households to wages are recorded.

Rent of Dwellings

No recent evaluation of the rent of dwellings has been made in Georgetown. A survey was being conducted in New Amsterdam, but the figures were not available in time for this study. The estimates made in the D'Andrade and Percival study *(9)* were based on the current evaluation in 1951 and as data were available on increases in rents between 1951 and 1956, the most reliable method seemed to increase the gross rental aggregate on the basis of this data. From taxation figures a sample of 100 dwellings was abstracted, and the increases in rent over the period were taken to be representative of the total increase. The totals given in the family budget survey *(14)* were however, equal only to one-third of this amount of approximately $14,000,000 (inflated D'Andrade and Percival figures) for 1956. In spite of the omission in the family budget survey of high income housing, the difference is so great as to suggest that there may be some degree of over-estimation in the D'Andrade and Percival report. Thus, the figure finally estimated was reached after consideration of these cross-checks. The difference between net and gross rents and the allocation of expenditure as between maintenance, insurance and rates and taxes was based on the pattern of

the 100 dwellings in inland revenue totals. The total is of course based on the assumption that all dwellings are rented; thus the rental value for the owner-occupied dwellings is in fact an imputed one.

Government

The government contribution to the gross domestic product includes salaries and wages plus income from government property, and entrepreneurship. The analysis of government accounts is described in more detail in Chapter IX.

CHAPTER VI

The National Income

Table 34 shows the distribution of the national income in slightly more detail than is given in the accounts. It was not always possible to obtain completely independent estimates for the national income, many of the sources being the same as those for the gross domestic product. In general the method used was to construct for each industry a consolidated account, from which both output (on the receipts side) and factor incomes (on the outlays side) were read from the same account. In the construction of these accounts, independent information on incomes was of course fully utilized. The main sources of information were, for wages, the Labour Department *(15)* and employers and for salaries and profits, aggregated tax records. The government accounts *(1)* were used to arrive at government emoluments.

Wages were estimated to a large extent from returns made by employers. Taxation records also showed total wage bills in some cases. The Labour Department provided information on rates of pay and numbers employed for some industries but did not keep information on annual wage bills. Total wages and salaries paid in the main sectors in 1956 are shown in Table 35.

The distinction between wages and salaries is a blurred one. In general, persons paid on a monthly rather than a weekly basis were included as salary earners, but a number of weekly paid earners in offices were also included. There were considered to be approximately 9,000 persons in the salaried group in 1956. Totals of salaries were obtained mainly from inland revenue sources and were totalled by the income tax office from returns made by employers. There were of course, many people who were in wage occupations listed in these returns and they were excluded from the computation of salary earners.

Table 35. Total Wages and Salaries Bill by Sectors in 1956

	$000
Agriculture	19,265
Livestock	1,342
Extraction	11,882
Processing and manufacturing	15,016
Engineering and construction	13,471
Commerce	20,167
Services	3,168
Government	24,982
National wages and salaries bill	109,293

In a country like British Guiana the distinction between a wage earner and an own-account worker is very blurred. There are a large number of family workers whose incomes are not counted as wages but as shares in profit. A minority of wage earners work in regular employment throughout the year

TABLE 34. DISTRIBUTION OF THE NATIONAL INCOME

$ Thousand

	1952	1953	1954	1955	1956
1. Compensation of employees					
(a) Wages	56,500	62,161	72,150	71,192	79,510
(b) Salaries	18,104	20,750	23,000	25,000	29,784
2. Income from farms, professions and other unincorporated enterprises					
(a) Cash income: estates, professions and other businesses	36,181	40,771	42,169	35,589	40,262
(b) Cash income: small farms	10,121	9,650	11,506	12,150	10,050
(c) Non-cash income	6,500	6,950	7,210	7,150	7,170
3. Income from property					
(a) Rent of dwellings	6,675	6,265	5,800	5,621	5,470
(b) Dividends and interest	475	785	700	418	549
4. Savings of resident corporations	911	1,724	1,043	4,534	3,186
5. Direct taxes on corporations	7,849	9,274	10,609	11,597	11,500
6. General government income from property and entrepreneurship					
(a) Profit on government enterprises	475	200	51	159	121
(b) Rent, interest, dividends	994	1,066	1,450	1,611	1,904
(c) Imputed rent, government property	550	550	550	550	550
Less Interest on public debt	– 1,051	– 1,125	– 1,168	– 1,193	– 1,572
National Income	144,284	159,021	175,070	174,378	188,484

and many individuals participate in business on their own account as well as in wage earning.

Table 36 shows wage rates prevailing for specified workers in certain industries in British Guiana over four years, 1952-55. These figures are only shown as an example of wage levels and changes in the period. There is a quite considerable range in the wage levels paid for different classes of workers and in different occupations in British Guiana.

TABLE 36. AVERAGE DAILY WAGE RATES IN CERTAIN OCCUPATIONS AND INDUSTRIES, 1952-55
(including cost of living bonus but excluding overtime)

	1952	1953	1954	1955
	$ ¢	$ ¢	$ ¢	$ ¢
Sugar: field time workers, Males	.85	.86	.86	.88
Females	.68	.70	.70	.71
Bauxite: carpenter I	.50	.53	.56	.65
lorry driver	.48	.52	.52	.62
unskilled labour	.40	.41	.42	.47
Port labour: stevedores	3.30	3.44	3.44	3.56

These rates indicate that only in bauxite was there a substantial increase in basic rates during the period. There is, however, not always a direct relationship between rates and actual earnings. Earnings depend on how much work is available (for labourers in the more seasonal industries). Some estimates of earnings are shown in Table 37.

TABLE 37. WEEKLY EARNINGS AND AVERAGE DAYS WORKED, 1952-55.

	1952		1953		1954		1955	
	Av. weekly earnings	Av. days worked	Av. weekly earnings	Av. days worked	Av. weekly earnings	Av. days worked	Av. weekly earnings	Av. days worked
Sugar planting:	$ ¢		$ ¢		$ ¢		$ ¢	
Piece workers	11.13	3.82	11.24	3.76	11.51	3.65	12.77	3.97
Time workers	7.52	4.97	8.09	4.82	8.88	4.81	8.52	4.79
Factory:		Hours		Hours		Hours		Hours
Unskilled	12.76	42	11.95	42	12.31	N.A.	13.00	N.A.
Waterfront:								
Stevedores	17.40	30	17.08	29	16.63	27	20.54	N.A.
Wharf workers	12.01	34	12.00	31	12.42	32	18.48	N.A.

Figures of wage rates and earnings were obtained from the Labour Department. It is estimated that the wage-earning labour force approximated to 109,000 during the years in question. This excludes the 9,000 classified as salaried, and excludes all own-account workers; it includes adults and young persons who were gainfully employed for part of the year and for whom wages were the main source of income. If we divide the estimated wages bill for 1955 by this number we find that the annual average income per head from wage earning was $575. This however includes a wide range of workers, from unskilled casual workers who may only earn $100 or so in the year to skilled workers earning in some cases $2,000 per year in regular employment.

Unincorporated profits were estimated mainly from aggregated tax records, private enquiries, and in some cases where information was completely lacking, were taken as a residual, when other outgoings were known. In Table 34 "Cash income from estates, professions and other businesses" includes mainly non-agricultural concerns (sugar is mainly produced by companies and rice by small farms). It does however include a few ranches and coconut estates.

The small farms included under item (b) Table 34, are mainly rice farms, but cash production of other products, chiefly fruit, vegetables and provisions is included. Non-cash income is of course a very rough estimate. Valuation is always at ex-farm prices.

Rent of dwellings is net rent which in 1956 was approximately 50 per cent of gross rent. In previous years it was a slightly greater proportion because outgoings on property maintenance have tended to increase at a faster rate than gross rents. The changes were mainly obtained from the samples showing changes in net and gross rent over the period.

The figures for dividends and interest cover in the main dividends received by residents for shares in corporate enterprises. The information was obtained mainly from totalled taxation data. It will be remembered that interest on consumer debt is excluded altogether from the accounts whilst interest on private loans for productive purposes is not differentiated from profit. This accounts for the relative smallness of this item.

The savings of resident corporations were derived mainly from tax totals. They include a number of incorporated distributive firms, a few firms engaged in agriculture, livestock and timber extraction, transport, manufacturing and three local insurance companies. The larger companies operating in British Guiana are of course classified as expatriate companies.

The figure for direct taxes on corporations was obtained from the annual reports of the Commissioner for Income Tax *(7)*. The figures for general government income from property and entrepreneurship and interest on public debt were derived from the government accounts, excepting of course the figure for rent of government property which is an imputed item.

CHAPTER VII

Capital Formation

It was necessary to circularize the larger firms with questionnaires regarding capital investment; therefore additional information showing the breakdowns of capital expenditure by type and by industry was requested. Besides returns from the larger firms, sources of information included import returns showing capital goods imported, and government accounts (for government capital formation). By type, capital formation was classified as follows: (a) buildings, houses and other structures; (b) machinery, vehicles and plant; (c) development and exploration; and (d) inventory change.

For private building of an industrial nature, returns from the larger companies were the major source of information. These returns covered mainly the mining and sugar industries. For other firms, balance sheet totals were the main source of data. Care had to be taken, when examining balance sheets, that purchases and sales did not relate to second hand properties and also to watch for alterations in the valuation given to an existing asset. For housing and other residential buildings, various sources were tapped. The Health Department provided numbers of houses and other structures completed during the years in question and both the P.W.D. and a private builder gave information on changes in the average cost of building various sized houses during the years in question. The Sugar Labour Welfare Fund annual reports also gave details of the cost of housing facilities erected under these schemes. Housing put up by companies is included in the gross capital formation of the sector concerned. Housing built by government has been included in government capital formation. House-building costs increased quite substantially during the period as is shown in the following figures for a two-roomed dwelling built privately.

Table 38. Cost of Building a Two-Roomed House (Timber)

	1953	1956
Labour	629.28	820.80
Local materials	430.56	561.60
Imported materials	563.04	734.40
Other	33.12	43.20
Total	1,656.00	2,160.00

A number of houses were erected under self-help schemes where the occupier provided much of the labour for building. In such cases, however, a value has been imputed to the labour involved.

As regards machinery, vehicles and plant, almost all the goods involved in this type of investment are imported and the total value can be estimated

by totalling imports of this type of goods and adding a margin for distribution, installation and duty. The only important items produced locally are bus bodies and boats and ships; the latter are, however, of some importance in the economy. Import returns were classified in three main groups, consumer goods, materials used in manufacture or agriculture and capital goods. The standard international classification numbers used to define capital goods are listed in Appendix I. To some extent capital imports can be classified according to the industry for which they are destined.

This method makes a complete coverage of the machinery, vehicles and plant imported. A check was, however, available from the questionnaires sent to bigger companies. In these questionnaires, information was requested on actual expenditure on commercial building, residential building, plant, machinery, and installation, vehicles, and exploration, development of mines, land etc. End-of-year stocks of main products were also requested. Under the heading of plant, machinery and vehicles, it is therefore considered that the capital formation figures are fairly reliable.

Information on development and exploration expenditure was sought from mining companies and from sugar companies, on land and drainage development. A considerable amount of this latter type of development is carried out by government and appears under government capital formation.

Estimates then had to be made of inventory changes. The large firms and marketing boards provided figures on the value of stocks of main products at the beginning and end of the years. These figures covered bauxite, gold, sugar, rum, molasses, padi and rice. Timber figures were obtained from some aggregated tax figures, but were not so comprehensive as those for other commodities. Information was carefully abstracted, showing stock changes in all large distribution firms and a number of smaller stores and the figures are believed to give a fairly reliable indication of the stock changes which took place in the period.

The following tables show capital formation details classified by industry:

TABLE 39. CAPITAL FORMATION: MINING

	$000				
	1952	1953	1954	1955	1956
Exploration and development	1,445	1,443	1,408	1,020	375
Residential building	287	263	198	9	63
Non-residential building	279	246	78	59	37
Plant etc.	2,250	2,287	2,947	1,879	3,477
Total fixed capital formation	4,261	4,239	4,631	2,967	3,952
Inventory change	+391	+444	+ 81	+127	−247
Total	4,652	4,683	4,712	3,094	3,705

TABLE 40. CAPITAL FORMATION: SUGAR INDUSTRY

	$000				
	1952	1953	1954	1955	1956
Development	793	420	104	11	67
Residential building	395	305	1,196	222	170
Non-residential building	156	259	416	374	405
Plant etc.	2,326	2,476	3,277	3,574	4,109
Total fixed capital formation	3,670	3,460	4,993	4,181	4,751
Inventory change	−2,682	+2,083	−4,172	−1,300	+542
Total	988	5,543	821	2,878	5,293

TABLE 41. CAPITAL FORMATION: OTHER AGRICULTURE AND FISHING

	$000				
	1952	1953	1954	1955	1956
Development, plant, vehicles etc.	1,009	1,830	1,905	1,750	1,408
Buildings	402	144	220	157	408
Total fixed capital formation	1,411	1,974	2,125	1,907	1,816
Inventory change	+1,637	−3,087	+6,237	−2,641	+111
Total	3,048	−1,113	8,362	−734	1,927

TABLE 42. CAPITAL FORMATION: TIMBER INDUSTRIES

	$000				
	1952	1953	1954	1955	1956
Development	250	210	121	350	98
Plant	1,050	1,135	277	1,280	1,472
Total fixed capital formation	1,300	1,345	398	1,630	1,570
Inventory change	−586	+ ,386	−234	+531	−768
Total	714	1,731	164	2,161	802

TABLE 43. CAPITAL FORMATION: TRANSPORT, CONSTRUCTION, COMMERCE, MANUFACTURING

	$000				
	1952	1953	1954	1955	1956
Vessels, vehicles and plant	5,882	7,265	7,342	8,057	8,752
Buildings	940	1,266	1,588	1,493	1,763
Total	6,822	8,531	8,930	9,550	10,515

TABLE 44. CAPITAL FORMATION: GENERAL GOVERNMENT

	$000				
	1952	1953	1954	1955	1956
Development of land, research, etc.	1,256	1,557	3,115	6,105	6,318
Residential building	261	80	681	1,244	3,967
Other structures, roads, bridges	3,319	2,413	6,751	12,150	8,788
Machinery and plant	62	60	121	430	775
Total	4,898	4,110	10,668	19,929	19,848

TABLE 45. CAPITAL FORMATION: RESIDENTIAL BUILDING NOT ALREADY DETAILED

	$000				
	1952	1953	1954	1955	1956
Sugar labour welfare	1,167	1,091	1,451	2,037	1,950
Other private	2,327	2,121	2,920	3,307	3,598
Total	3,494	3,212	4,371	5,344	5,548

TABLE 46. TOTAL FIXED CAPITAL FORMATION: ALL INDUSTRIES AND GOVERNMENT

	$000				
	1952	1953	1954	1955	1956
Exploration and development	3,744	3,630	4,748	7,436	6,858
Residential building	4,437	3,860	6,446	6,819	9,748
Structures	5,096	4,328	9,053	14,233	11,401
Plant, machinery etc.	12,579	15,053	15,869	16,970	19,993
Total	25,856	26,871	36,116	45,458	48,000

TABLE 47. CAPITAL FORMATION BY INDUSTRY, 1952-56
(including Inventory change)

	$000				
	1952	1953	1954	1955	1956
Mining	4,652	4,683	4,712	3,094	3,705
Sugar	988	5,543	821	2,828	5,293
Agriculture	3,048	−1,113	8,362	−734	1,927
Timber	714	1,731	164	2,161	802
Transport	3,451	3,479	2,913	3,512	4,217
Manufacturing	1,745	2,643	2,894	3,074	3,265
Construction	1,121	1,648	2,030	1,904	1,712
Government	4,898	4,110	10,668	19,929	19,848
Other Residential	3,494	3,212	4,371	5,344	5,548
All other	505	761	1,093	1,060	1,321
Distributors stocks	+1,890	−2,246	+347	+3,811	+454
Total	26,506	24,451	38,375	45,983	48,092

To arrive at net capital formation the following method was used to calculate depreciation. No government property was depreciated. This is in line with government accounting practice, in which replacement of assets is a charge against current revenue. This is purely a conventional approach and if, in future estimates, it is desired to estimate a depreciation figure for government assets, this can be included. No depreciation was included for land and drainage works except when such depreciation is inseparable from that on certain other assets such as pumping machinery in the accounts of plantations.

Whenever the figure was available the depreciation charged in companies' accounts was used rather than the wear and tear allowances allowed by the income tax office. The former are usually some 20 per cent higher than the latter. When only wear and tear figures were shown an additional estimate was therefore made. Depreciation of houses was allowed for at 15 per cent of the actual and imputed rent. The amount for vehicles was estimated from registration figures. An arbitrary estimate was made for assets of small businesses not already covered.

The figures for depreciation, as included in national income estimates in many countries, have been considered to be of dubious value, and a suggestion has even been made to do away with the distinction between net and gross national product *(8)*. The distinction has an importance in developing countries however, in that it is difficult to measure the exact rate of development unless some concept of "maintaining capital intact" is included. As government assets and standing crops are excluded from depreciation

TABLE 48. CAPITAL FORMATION ACCOUNT, 1952-56.

$ 000

Expenditure	1952	1953	1954	1955	1956	Sources of Funds	1952	1953	1954	1955	1956
Gross capital formation						Government					
Government	4,898	4,110	10,668	19,929	19,848	Loans	—		4,581	12,181	10,263
Enterprises	20,958	22,761	25,448	25,529	28,152	Grants	2,589	1,871	2,364	3,885	4,832
						Saving	2,309	2,239	3,723	3,863	4,753
Fixed capital formation	25,856	26,871	36,116	45,458	48,000						
						Expatriate firms					
Inventory changes						Depreciation	5,012	4,373	5,012	5,311	5,250
Producers' stocks	−1,240	− 174	+1,912	−3,286	− 362	Saving	6,541	5,028	6,865	5,267	6,753
Distributors' stocks	+1,890	−2,246	+ 347	+3,811	+ 454	Households and local firms					
Net stock exchange	+ 650	−2,420	+2,259	+ 525	+ 92	Depreciation	2,950	3,268	2,795	3,613	3,182
						Saving	8,291	16,040	22,036	18,780	19,727
						Less to Govt.			− 550	−2,900	−1,879
						Overseas (including short term movements)	−1,186	−8,368	−8,451	−4,017	−4,789
Gross capital formation	26,506	24,451	38,375	45,983	48,092	Gross capital formation:	26,506	24,451	38,375	45,983	48,092
Less depreciation	−7,962	−7,641	−7,807	−8,924	−8,432						
Net capital formation	18,544	16,710	30,568	37,059	39,660						

in British Guiana, the figure shown of roughly $8 million annually is clearly on the low side. It may, however, well be taken as a "rock bottom" figure for the maintenance of existing capital. If annual capital formation fell below this capital would be rapidly run down.

Table 48 shows the sources of capital funds on the left hand side and the heads of expenditure on the right hand side.

CHAPTER VIII

Consumers' Expenditure

Table 49 shows in detail the consumers' expenditure on various items during the years 1952-56. The main sources of information for this table were as follows: (a) import returns, (b) production data, (c) the family budget survey of 1956 *(14)*. The study made by D'Andrade and Percival for 1948-51 was also referred to as it was considered desirable to keep the heads of expenditure the same as far as was possible.

The family budget survey which was undertaken by the International Labour Office in 1956 was a very valuable check on expenditure. It was considered worthwhile to estimate consumers' expenditure firstly by reference to imports and domestic production figures, adding the relevant margin to arrive at retail values. The family budget survey was then used as an independent check. The degree of comparability was very high. For a few commodities a significant discrepancy resulted but further investigation generally disclosed a weakness in one of the sources. For instance some commodities were known to be under-represented in the family budget survey, owing to poorer households only being chosen. Table 50 shows the commodities in which a fairly wide discrepancy existed. As many of the commodities are ones for which import data or production data were fairly reliable, the figure arrived at by this method was generally used in this survey rather than that of the family budget study.

The list in Table 50 does not include such items as motor cars, refrigerators and other goods consumed mainly by higher income groups. It will be seen from the list that only in the cases of fish, dairy products and sugar were the discrepancies significant. As regards fresh fish the family budget survey appears to have underestimated the amount consumed. For sugar products the figures of local sales given by the sugar companies are higher than the family budget survey figure. The discrepancy in dairy products arises mainly in imported powdered and tinned milk and the import figures are accepted although it is recognized that for one commodity, drastic stock changes could have affected the picture. All in all the high degree of comparability between the two quite independent estimates can serve to strengthen confidence in both studies.

For locally grown foodstuffs, the agricultural production figures were used. The Labour Department provided retail prices for a number of commodities which could be compared with growers' prices already obtained for the production estimates. Some information regarding food consumed on farms was available from the production surveys but it is considered that further studies of food grown for domestic consumption, either at home or for the market, are badly needed.

TABLE 49. PERSONAL CONSUMPTION EXPENDITURE 1952-56

$000

	1952	1953	1954	1955	1956
Fresh beef	3,211	3,561	3,311	3,210	3,513
Fresh pork	613	520	550	585	670
Fresh other meat and poultry	550	622	858	851	924
Salted and pickled meat	1,003	931	1,250	1,156	1,267
Canned meat	560	494	708	559	735
Total Meat	5,937	6,128	6,677	6,361	7,109
Milk, fresh and preserved	4,447	4,430	3,210	4,110	5,581
Butter, cheese, etc.	1,747	1,038	1,399	1,662	1,550
Eggs	785	810	761	725	760
Total Dairy Products	6,979	6,278	5,370	6,497	7,891
Fresh fish	3,911	4,421	4,950	5,501	6,408
Salted and pickled fish	1,420	2,113	1,295	1,450	1,541
Canned fish	591	732	739	833	941
Total Fish	5,922	7,266	6,984	7,784	8,890
Bread	2,110	2,265	2,521	2,121	2,173
Biscuits, cake	525	610	575	310	580
Flour	3,030	3,191	4,219	3,951	4,500
Rice	8,121	8,519	8,000	7,611	8,689
Other cereals	410	402	295	412	352
Total Cereals	14,196	14,987	15,610	14,405	16,294
Fresh fruit and nuts	1,285	1,311	1,325	1,309	1,380
Dried, canned fruit, etc.	577	683	635	821	685
Total Fruit	1,862	1,994	1,960	2,130	2,065
Ground provisions	4,702	4,781	4,950	5,210	4,980
Plantains	850	875	891	910	900
Fresh vegetables and pulses	1,998	2,181	1,950	2,321	2,790
Canned and dried vegetables	183	385	379	356	350
Total Vegetables	7,733	8,222	8,170	8,797	9,020
Sugar	1,975	2,050	2,098	2,086	2,125
Confectionery	532	401	411	345	430
Edible oils	2,790	2,850	3,010	3,150	3,001
Margarine & lard	850	892	878	840	855
Other foods	2,750	2,761	2,892	2,950	3,500
Total Miscellaneous Foods	8,897	8,954	9,289	9,371	9,911
Coffee, cocoa, tea	1,489	1,550	1,621	1,611	1,981
Soft drinks	575	575	590	575	650
Rum	4,511	4,621	4,950	4,998	5,150
Other spirits	351	480	591	441	200
Beer, cider	1,910	1,937	2,422	1,952	2,000
Wines	83	90	76	68	30
Ice	269	295	295	275	300
Tobacco	2,998	3,121	3,870	3,781	4,100
Total Beverages	12,186	12,669	14,415	13,701	14,411

TABLE 49 (Cont'd.) PERSONAL CONSUMPTION EXPENDITURE, 1952-56

$ 000

	1952	1953	1954	1955	1956
Electricity	2,510	2,750	3,111	3,219	3,450
Firewood	900	975	975	1,010	1,200
Kerosene	650	775	1,396	1,100	1,500
Other, matches, etc.	1,250	1,350	1,401	1,351	1,400
Total Fuel	5,310	5,850	6,883	6,680	7,550
Furniture	1,550	1,650	1,600	1,625	1,750
Electrical, stoves, fridges	1,436	1,572	756	899	711
Hardware and household	5,500	5,750	5,850	5,911	6,300
Cleaning	1,950	1,750	1,750	1,687	2,400
Personal	5,301	5,550	7,610	7,511	8,100
Total Household	15,737	16,272	17,566	17,633	19,261
Fabrics	7,600	8,750	8,500	9,010	9,500
Ready-made clothing	2,500	2,110	2,700	2,891	3,521
Footwear	2,255	2,750	2,838	2,911	3,300
Other, tailors, etc.	1,750	1,750	2,191	2,611	2,520
Total Clothing	14,105	15,360	16,229	17,423	18,841
Road transport	3,250	3,740	4,421	4,678	5,585
Water, and rail	921	1,011	819	940	1,047
Air	161	190	210	224	211
Postal	480	500	550	560	571
Motor cars	2,219	1,561	1,581	1,578	1,850
Cycles	365	500	450	410	550
Gasolene, repairs	750	750	850	800	900
Overseas	398	375	450	511	621
Total Transport, etc.	8,544	8,627	9,331	9,701	11,335
Repairs, engineering, etc.	50	50	50	50	50
Finance, insurance	1,275	1,672	1,850	1,950	1,821
Education	811	850	800	899	1,010
Medical	925	1,061	891	995	1,057
Religion	650	650	750	800	611
Legal, etc.	650	600	650	690	700
Recreation, Entertainment	810	867	832	899	950
Domestic services	980	1,090	1,225	1,700	1,825
Catering	975	911	1,275	1,475	1,699
Laundries, etc.	480	490	511	520	872
Total Services	7,606	8,241	8,834	9,978	10,595
Rent of dwellings	10,006	9,978	10,321	10,511	11,232
Direct taxes	1,313	1,583	1,605	1,765	3,803
Other payments	1,472	1,681	1,799	1,850	1,896
Total to Government	2,785	3,264	3,404	3,615	5,699
Unclassified Expenditure	3,495	3,580	4,254	3,400	2,192
Saving	7,380	14,316	21,993	14,246	16,541
Grand Total	138,680	151,986	167,290	162,233	178,837

TABLE 50. CONSUMERS' EXPENDITURE: COMPARISON OF TWO SOURCES OF DATA, 1956

	$000				
	(a) Imports + Margins	(b) Output + Margins	(c) Total (a) + (b)	(d) Fam. Bud. Survey	(e) (c) as % of (d)
Meat, fresh	187	4,191	4,378	4,103	107
Meat, preserved	1,902	—	1,902	1,643	115
Fish, fresh	15	6,408	6,413	4,588	140
Fish, preserved	2,482	35	2,517	2,511	100
Cereals and bakery	5,337	10,136	15,473	14,489	107
Dairy products, fresh and preserved	5,750	2,525	8,275	5,892	140
Fats and oils	1,452	2,497	3,943	4,395	90
Vegetables	43	2,520	2,563	2,270	113
Provisions	1,730	3,142	4,872	4,298	113
Fruit	405	911	1,116	1,062	105
Pulses, dried veg. etc.	1,967	311	2,278	2,947	78
Sugar and sugar products	680	2,607	3,287	2,366	139
Other foods	3,121	750	3,871	4,443	87

Imports are valued c.i.f. and to this figure it was necessary to add import duty and retailers' and wholesalers' margins (including storage and transport in British Guiana). The margin could be estimated in three ways: (a) a comparison of retail prices with customs entry prices; (b) direct enquiry from firms regarding margins; and (c) estimates of gross margins covering a range of goods from aggregated tax records of distributors. Margins between importers' prices and final consumers' prices ranged from 10 per cent to 80 per cent but for most basic commodities such as potatoes, flour and hardware, were between 20 per cent and 30 per cent (inclusive of duty, wholesalers' and retailers' margins, handling and storage). It is noted that handling charges for low value heavy cargoes (such as flour) are a higher proportion of total value than for higher valued cargoes (particularly if lighter or less bulky). This factor is not of nearly such great importance in British Guiana where wharfage facilities are good as it is in the smaller islands, and compared with most West Indian territories the margin between imported price and retail price is low. This is an extremely important factor in keeping down the cost of living, as it is not uncommon in the smaller islands to find retail price 80 per cent higher than imported price for basic commodities (which are generally duty free).

CHAPTER IX

The Government Sector

The central government current account is derived wholly from the Reports of the Accountant General for 1952-56 *(1)*. The local government figures are derived from the Reports of the Commissioner for Local Government *(17)*, the Statements and Accounts of the Georgetown Town Council, and the Annual Accounts of the New Amsterdam Town Council.

It is recognized that a much more detailed analysis of government expenditure is desirable than that undertaken in this survey. Each government department makes payments out to other sectors of the economy. For some departments such as Public Works these payments involve hundreds of transactions. To obtain an exact breakdown would involve an examination and detailed classification of a large number of vouchers. This work can only be done ultimately by a proper system of statistical coding operated in the department itself. It is to be hoped that it will be possible gradually to introduce such methods into the departments. In the meantime the present method of classification based on the far less detailed government annual accounts may be continued.

Central government expenditure was analyzed in as much detail as was possible from the published accounts. Each item of expenditure was marked off with a code letter indicating to which sector the payment had been made. The main items were to households (salaries and wages), transport, local purchases (i.e. foodstuffs for hospitals, prisons, etc., printing, furniture, electricity), maintenance (which is mainly carried out by government staff but may involve some payments to the engineering sector). Other payments are made for direct imports and to professional services (professional people who are not full-time government employees may receive fees from government). Allowances paid to officers for travelling and subsistence were included as a payment to households. Transfer items such as subsidies, pensions and social welfare grants were of course classified separately. Having coded the items in the accounts, they could be totalled for each type of expenditure. The accounts for local authorities were treated in the same way as those for central authorities.

As the actual vouchers recording the transactions were not used it was not always easy to classify transactions exactly, as for instance between road and water transport. As the total value of government direct imports was known however, it was possible to allocate values accurately as between imported goods and goods bought from local firms. Certain items of expenditure are composite items: some items classified as maintenance, for instance, include payments both for labour and materials. In a few cases,

where large amounts were involved, reference was made to the more detailed accounts of the department concerned. On the expenditure side the Government Account in the set of accounts shows: (a) government consumption expenditure which includes all current consumption items; (b) subsidies; these have been small in British Guiana and took the form mainly of cancelling duty temporarily on certain food imports. Subsidies are however paid to the Transport and Harbours Department, which is not considered as a part of government but as a part of the water transport sector. The Transport and Harbours Department operates on the lines of a commercial enterprise rather than as a government department; (c) current transfers to households which include pensions, relief and other gratuities; (d) current transfers to the Rest of the World which includes such items as British Guiana's contribution to the University College of the West Indies and other West Indian and international organizations; and (e) government saving.

As with expenditure it was not always possible to say exactly how government receipts were divided as between sectors, and a certain amount of estimation was necessary. Only a more detailed enquiry could for instance, show the exact contribution of each industry to import duties, but estimates were made based on the available information.

For the purpose of the classification in the Government Account in the set of accounts, receipts are classified as follows: (a) income from property and entrepreneurship, which includes interest, rent, profits on a number of small enterprises, marketing, Post Office, etc., export duties and an imputed figure of $550,000 representing imputed rent of government property; (b) indirect taxes, which besides import duties, include all licences and fees paid by business firms to government, unless they are payments for a specific service; (c) current transfers from households. No entry was made under this head. In British Guiana there are thus no significant payments of this kind which in other countries include mainly social insurance contributions paid by households to governments.

Royalties have, in this study, been included as indirect taxes. As regards export duties, there is some difference of opinion regarding their classification (20). Sometimes they are included as indirect taxes and sometimes as government income from property. The latter method is used in this study as it is considered that as they are likely to be directly a tax on profit (since the price of export goods is fixed by external conditions) their value should be included in the gross domestic product. It should be noted that interest on public debt is finally deducted from all national income tables as a transfer. This convention has been adhered to in this study although the practice is questionable, since in underdeveloped countries it is more likely that public debt has been contracted for productive capital investment rather than for government current outlays as is usually the case in developed countries.

Intra-departmental and intra-government transactions were of course eli-

minated from the final accounts. These mainly constituted transactions between local and central government. It was not possible to show central and local government separately. The accounts for local government were of a very summary nature and in some cases were not available for recent years. The amount of estimation that was necessary for local government was thus rather high and did not justify presentation as a separate sector.

Government consumption expenditure as shown in the accounts and in Tables 51-54 is less than the total of government current expenditure in the government accounts. The difference is equal to the value of receipts by government from households and enterprises for goods and services provided by government. These values include school fees, medical attention, pilotage and other goods and services and have already been accounted for in other sectors. Their value in 1956 was estimated at $2,811 million.

In Table 52 government consumption expenditure is classified by broad heads of outgoings, which indicate government contribution to the gross domestic product and in Table 53, consumption expenditure is classified by purpose. The heads under this classification are: (a) general administration, which includes all expenditure by administrative departments, (b) econ-

TABLE 51. GOVERNMENT CURRENT REVENUE AND EXPENDITURE

$000

	1952	1953	1954	1955	1956
Government Current Revenue					
Income from property and entrepreneurship	2,019	1,816	2,051	2,320	2,575
Less interest on public debt	−1,051	−1,125	−1,168	−1,193	−1,572
Indirect taxes	20,378	20,440	21,670	25,961	26,388
Direct taxes on corporations	7,849	9,274	10,609	11,597	11,500
Direct taxes on households	1,313	1,583	1,605	1,765	3,803
Total Current Revenue	30,508	31,988	34,767	40,450	42,694
Government Current Expenditure					
Government consumption expenditure	21,340	21,807	22,218	25,958	28,376
Subsidies	1,859	2,323	3,104	2,768	2,157
Current transfers to households	3,866	4,383	4,491	4,781	5,465
Net transfers to Rest of World	1,134	1,236	1,231	3,080	1,943
Saving	2,309	2,239	3,723	3,863	4,753
Total Current Expenditure	30,508	31,988	34,767	40,450	42,694

TABLE 52. COMPOSITION OF GENERAL GOVERNMENT CONSUMPTION EXPENDITURE BY TYPES OF EXPENDITURE

	1952	1953	1954	1955	1956
1. Compensation of employees —					
a) Wages	3,471	3,659	3,861	4,333	5,519
b) Salaries	11,866	14,297	15,865	18,054	19,463
2. Purchases —					
a) From enterprises	4,262	1,577	999	1,044	299
b) From overseas	1,741	2,274	1,493	2,527	3,095
Government consumption expenditure	21,340	21,807	22,218	25,958	28,376

TABLE 53. COMPOSITION OF GENERAL GOVERNMENT CONSUMPTION EXPENDITURE BY PURPOSE

	1952		1953		1954		1955		1956	
	$000	%	$000	%	$000	%	$000	%	$000	%
General administration	5,152	24.6	5,550	25.5	5,212	23.5	5,554	21.4	6,900	24.3
Economic services	3,601	16.9	3,735	17.1	3,835	17.3	3,950	15.2	3,800	13.4
Social services	4,084	19.6	4,036	18.5	4,434	19.9	5,420	20.9	5,850	20.6
Communications etc.	2,555	12.0	2,612	12.0	2,777	12.5	2,999	11.6	2,755	9.7
Education	2,998	14.0	2,750	12.6	2,950	13.3	3,950	15.2	4,560	16.1
Law and defence	2,750	12.9	3,124	14.3	3,010	13.5	4,085	15.7	4,511	15.9
Government consumption expenditure	21,340	100.0	21,807	100.0	22,218	100.0	25,958	100.0	28,376	100.0

omic services which includes such departments as agriculture, forestry and lands and mines, (c) social services which consists mainly of medical and housing expenditure, (d) education, (e) communications, and (f) law and defence. Departments were not subdivided for this classification except that public works expenditure went partly to economic services and partly to communications. The classification is a very broad one. In Table 54 is shown the allocation of government consumption expenditure between local and central governments.

TABLE 54. COMPOSITION OF GENERAL GOVERNMENT CONSUMPTION EXPENDITURE BY TYPE OF AUTHORITY

$000

	1952	1953	1954	1955	1956
1. Central government	19,589	19,801	20,038	23,508	25,774
2. Local government	1,751	2,006	2,180	2,450	2,602
Government consumption expenditure	21,340	21,807	22,218	25,958	28,376

CHAPTER X

External Transactions

The figures of merchandise exports were obtained from the trade returns. Sugar preference certificates, although they may relate to a previous year's production, would be distributable in the current year and no adjustment has been made for the lag. The value of sugar preference certificates was obtained from the Customs Department. Ships' stores must be deducted from merchandise exports as they are included in "Transport and Insurance" in Table 55. It is conventional when preparing Balance of Payments tables to show merchandise totals, excluding gold, and then to add back gold, but this has not been done in these tables for British Guiana, because gold is produced in the colony and movements are non-monetary. Merchandise figures include the value of export taxes.

Trade returns were also used for merchandise imports figures. As the figures are shown c.i.f., insurance and freight must be deducted to show actual merchandise trade. The value of insurance and freight was arrived at by analysing a sample of customs importation bills. The sample was stratified into type of goods and country of origin and the percentage figure of insurance and freight to c.i.f. import value for each group was applied to the total imports, similarly stratified. This was done for 1956 returns only and showed a percentage of 12 per cent. Enquiries from shippers showed there had been a rise in these rates which was steeper than the rise in import prices during the years in question, and the following percentages were estimated: 1952 = 10 per cent; 1953 = 10 per cent; 1954 = 11 per cent; 1955 = 12 per cent; 1956 = 12 per cent (freight and insurance as a percentage of the total value of imports). In Table 55 the merchandise figures are thus estimated separately from other transactions.

An estimate was then made for transport and insurance transactions. On the receipts side British Guiana gained revenue as follows: (a) expenditures by tourists and visitors from overseas whether they stay in the colony or spend money in the colony, whilst in transit by sea or air; (b) receipts from ships and aircraft registered overseas, which may include expenditure by crews, purchase of ships' stores, wharfage and port dues; (c) operating expenditure of foreign airlines which maintain staff in the territory; (d) ships and airlines registered in British Guiana, also received charter, passenger and freight earnings from overseas countries; (e) insurance claims paid by overseas companies to British Guiana residents are also receipts, as would be premiums paid to British Guiana companies by overseas residents.

On the expenditure side the following items may occur: (a) expenditure by British Guiana residents when going overseas. This will include fares and

TABLE 55. BALANCE OF PAYMENTS: BRITISH GUIANA, 1952-56
CURRENT ACCOUNT
$000

	Receipts	Payments
Merchandise		

TABLE 55. BALANCE OF PAYMENTS: BRITISH GUIANA, 1952-56
CURRENT ACCOUNT
$000

Receipts	1952	1953	1954	1955	1956
Merchandise					
1. Merchandise exports	81,756	83,132	85,404	90,533	94,692
2. Sugar preference certificates	845	941	1,003	1,104	1,117
	82,601	84,073	86,407	91,637	95,809
Less:					
3. Ships' stores and ships' and aircraft fuel	234	174	131	129	101
4. Total Merchandise	82,367	83,899	86,276	91,508	95,708
Travel					
5. Expenditure by non-residents	150	150	150	200	250
6. Receipts of B.G. ships and aircraft	75	97	121	121	332
7. Expenditure by o/seas shipping and aircraft	1,257	1,196	1,145	1,097	1,587
8. Total Travel	1,482	1,443	1,416	1,418	2,169
Investment Income					
9. Private and Coys.' dividend income	296	312	364	375	377
10. Government interest	291	310	245	300	426
11. P.O.S.B. interest	457	500	532	566	593
12. Total Investment Income	1,044	1,122	1,141	1,241	1,396
Transfers and subscriptions, etc.					
13. Local expenditure by U.K. forces	116	180	217	220	325
14. Remittances and donations	356	392	395	458	694
15. Transfer U.K. to B.G. Govt.				1,200	
16. Total Transfers, etc.	472	572	612	1,878	1,019
17. Total Current Account	85,365	87,036	89,445	96,045	100,292

Payments	1952	1953	1954	1955	1956
Merchandise					
18. Merchandise imports	82,619	71,987	79,970	94,518	99,877
Less:					
19. Insurance and freight	8,262	7,199	8,797	11,342	12,310
20. Total Merchandise	74,357	64,788	71,173	83,176	87,567
Travel and Insurance					
21. Disbursements o/seas B.G. ships and A/L	12	16	15	10	17
22. Expenditure o/seas and fares of residents travelling	875	831	892	919	1,021
23. Insurance and freight on imports	8,262	7,199	8,797	11,342	12,310
24. Total Travel, etc.	9,149	8,046	9,704	12,271	13,348
Investment Income					
25. Profits of non-res: subsidiaries	8,021	10,045	9,309	8,868	10,802
non-res: branches	521	1,301	1,669	1,712	1,668
26. Dividends and interest paid by residents to o/seas	29	30	37	28	27
27. Interest on public debt	946	945	1,055	1,125	950
28. Total Investment Income	9,517	12,321	12,070	11,733	13,447
Transfers and subscriptions, etc.					
29. Private remittances	98	121	131	126	117
30. Subscriptions by government	326	444	391	2,968	517
31. Pensions from government	808	792	840	1,312	1,426
32. Total Transfers, etc.	1,232	1,357	1,362	4,406	2,060
33. Total Current Account	94,255	86,512	94,309	111,586	116,422

TABLE 55 (Cont'd) BALANCE OF PAYMENTS, CAPITAL ACCOUNT: BRITISH GUIANA 1952-56.
Capital Receipts (+) and Payments (−)

$ Thousand

	1952	1953	1954	1955	1956
34. Balance of payments on current account	−8,890	+ 524	−4,864	−15,541	−16,130
Less; Interest on public debt	+ 946	+ 945	+1,055	+ 1,125	+ 950
35. Direct investment of overseas companies (excluding depreciation)	+6,541	+5,028	+6,865	+ 5,267	+ 6,753
36. Government grants	+2,589	+1,871	+2,364	+ 3,883	+ 4,832
37. Government loans			+3,207		+ 7,184
38. Changes in residents' holdings of overseas assets	−1,186	−8,368	−8,451	− 3,217	− 3,589
39. Changes in government holdings of overseas assets (including P.O.S.B.)	−3,323	−6,118	−1,585	+ 754	+ 190
40. Known changes in private short term balances	−2,154	+1,512	+2,280	+ 6,798	− 1,468
41. Changes in government short term balances	+2,837	+1,632	+ 628	+ 3,226	− 1,090
42. Errors and omissions	+2,640	+2,974	−1,499	− 2,295	+ 2,368

Relationship of above account with Account 6.

Account 6: Balance of Payments

Account 6.1 = 4 + 8 + 13
6.2 = 12
6.3 = 14 less 29
6.4 = 30 + 31 less 15
6.5 = 36
6.6 = 20 + 24
6.7 = 25 + 26
6.8 = 37 less 35 plus or minus changes in balances.

shipboard expenses and expenses during the visit overseas; (b) British Guiana registered ships and aircraft make disbursements overseas; (c) insurance and freight on imports, (which was deducted from merchandise trade and which must be added back in the "Transport and Insurance" sector as an outgoing to overseas carriers, except in so far as imports are conveyed in British Guiana registered ships or aircraft.) Insurance premiums paid out to overseas companies will be included as will claims paid out to overseas residents by British Guiana companies.

Information on shipping and aircraft arrivals was available and showed the following movements:

TABLE 56. SHIPPING AND AIRCRAFT MOVEMENTS

	1952	1953	1954	1955	1956
Number of ships arriving	1,146	1,100	1,071	1,071	1,040
Tonnage (000)	2,612	2,050	1,859	2,418	2,316
Aircraft arriving	1,420	1,392	2,113	3,168	2,428
Air passengers arriving in transit	7,750	8,226	9,301	9,580	10,432

Although immigration cards are filled in and the information given would indicate purposes of visit of many visitors, these cards were not available for use. It is suggested that the information on these cards should in future be summarized and published, as although tourism was insignificant in the years in question, it may increase in the future. Estimates regarding expenditure by tourists and business visitors are thus based on very poor information; this expenditure is estimated at $150,000 per annum for the first three years on the basis of there having been approximately 750 visitors of this kind per annum spending an average of $200 per head. There was a definite increase in the number of visitors in 1955 and 1956 and the totals are estimated at $200,000 and $250,000 for those years.

Expenditure by local residents overseas is based on slightly more information, as government and the larger firms were able to indicate the numbers of their employees going overseas. A number of local businessmen and private individuals also travel, however. The expenditure by local residents overseas is certainly considerably higher than British Guiana's receipts from tourists and other visitors. Leave passages, shipboard expenses and expenditure by local residents whilst overseas was estimated at the following figures for the five years in question ($000): 875 in 1952, 831 in 1953, 892 in 1954, 919 in 1955 and 1,021 in 1956.

The number of crew per ship was estimated to average 30, and that of aircraft 4. Expenditure by visiting air crews probably averaged not more than $2.50 per head, as stops were often of short duration. Most ships calling stay for two or three days, however, and expenditure by crews was estimated at $10 per head. Port, pilotage and government wharfage and aerodrome fees were obtained from government accounts. Ships' stores and fuel were obtained from customs returns. Figures showing receipts and disbursements of British Guiana registered carriers were based on estimates from inland

revenue information. Private wharfage figures were obtained from the companies concerned.

A deduction of 15 per cent was made from the expenditure in the colony by carriers, to account for British Guiana Airways aircraft and for ships registered in the colony. The tonnage registered was 3,692 net tonnage in 1956. There were two steamers of approximately 400 tons gross each. The remaining vessels were schooners and small motor vessels, many of them operating only within the colony. Details of transportation and insurance transactions are shown in Table 57.

TABLE 57. EXTERNAL RECEIPTS AND PAYMENTS: TRANSPORT

	1952	1953	1954	1955	1956
RECEIPTS					
Pilotage and wharfage	1,010	963	970	965	1,148
Aerodrome fees	29	28	35	34	42
Ships and aircraft, fuel and stores	234	174	131	129	101
Expenditure by crews: air	14	15	21	31	24
sea	344	330	321	321	412
Receipts of B.G. carriers from overseas	75	97	121	121	232
	1,706	1,607	1,599	1,601	1,959
Less 15% for B.G. carriers	1,431	1,367	1,360	1,360	1,719
PAYMENTS					
Disbursements o/seas by B.G. carriers	12	16	15	10	17
Insurance profit	— 8	896	1,098	1,080	970
Freight and insurance on imports	8,262	7,199	8,797	11,342	12,300
	8,266	8,111	9,910	12,432	13,287

Insurance profits are taken as the difference between premiums and claims plus local expenses as regards branches of overseas companies. In the year 1952 a number of large claims made the colony a net recipient under this head. Fairly wide fluctuations may, of course, show from year to year in this item. The item of insurance and freight shown on the payments side is the freight and insurance on imports, which was previously deducted from the value of c.i.f. merchandise imports.

Private investment income includes on the receipt side, income of British Guiana residents from investments overseas. Totals for private individual and company income of this kind were obtained from the Income Tax Department, although a certain amount of the private individual's income (which is small in any case) was believed to have been concealed. The largest part of this item relates to the investments of three local insurance companies. It was found that they hold about 70 per cent of their investments overseas, although there has been a tendency for them to take up more investments within the colony within the last two years. Dividend income includes income distributed within the colony by local branches and subsidiaries of overseas companies.

The definition of what is an overseas and what is a local company is sub-

ject to many variations, particularly when, as in the Booker group of companies, many are local subsidiaries of overseas companies. Taking the United Nations definition to its logical conclusion, however, we have included all subsidiaries in any shape or form, as overseas companies. This means that not only Bookers, but Sprostons, Demba and a number of other companies are overseas companies. This is considered particularly logical in a place such as British Guiana where most shareholders are overseas residents, where capital transactions are administered from overseas and where the actual payments in the country would include costs of production, a small amount of distributed profit and capital investments. The decision to classify these companies in this way does not of course alter the net position finally, but it does mean that larger movement of funds is exhibited in the balance of payments than would be the case had they been classified as local companies. In the set of accounts, depreciation of expatriate companies is not assumed to leave the country.

On the payments side, private investment income therefore shows the net profit after tax of these subsidiary companies, and also similar profits of branches of non-resident concerns, such as the banks, insurance companies and certain agencies and distributors.

Government investment income includes, on the receipts side, interest on reserve funds and Post Office Savings Bank funds. On the payments side, interest on public debt paid to overseas bondholders is included.

A further item on the current account is grants, remittances and donations. On the receipts side private people may receive remittances from overseas. A number of Guianese are known to be working overseas, both in the U.K. and the dollar area. The exact number was not known. The Post Office provided information on the receipts of money and postal orders. A small part of this may be in payment for goods; on the other hand a small part of remittances may be received in cash or by cheque so it is assumed that these small differences cancel out. The total of remittances approximates to the Post Office figures.

Remittances sent overseas may include remittances mainly by expatriates serving in British Guiana to wives and families overseas, or by expatriates and local people to support children being educated overseas. A limited enquiry showed that this last item was fairly important. It must be remembered that most Guianese students at the University College of the West Indies are partly or wholly supported by their parents. An estimate of numbers being educated overseas and average cost per head was made in order to arrive at these figures.

Official grants and remittances paid include the government's subscription to the University and other overseas institutions in which British Guiana participates. It also includes pensions paid overseas to former civil servants. On the receipts side this heading would include grants in aid and other free grants, had any been received. Development and Welfare grants are, how-

ever, considered as capital inflows, being mainly for capital purposes. In 1955 a sum of approximately $2,000 was transferred to the War Office on account of the emergency expenditure. On the receipts side a transfer back of approximately $1,200 was made under the same head.

The items under the Capital Account were estimated as follows: private direct investment carried out in the colony includes direct investment by all subsidiaries and branches of overseas companies. This of course includes the unremitted profits of those companies which have been classified as expatriate concerns. The information was obtained from the questionnaire used for the capital formation estimates. It relates to actual expenditure during the year, not amount capitalized by firms. All investment in sugar, mining and 27 per cent of investment of other groups was classified as investment from overseas, according to the classification made of overseas companies decided earlier in this chapter. A large item of investment now in progress is the alumina plant at Mackenzie, only a small amount of this shows in 1956, but it will lead to a substantial increase in the direct investment figures in 1957 and the following years. Care must be taken not to interpret such "lumpy" investment as being a permanent trend. Depreciation was excluded from international movements.

Private and company holdings of non-resident assets increased during the period. The biggest item was the increase in the holdings of local insurance companies. Private and company liabilities to non-residents are small. The figures relate to overseas ownership in local firms and companies.

Government reserve funds, including the Post Office Savings Bank funds are valued at market price. This seemed to be the most practical method of valuation, although it is admitted that "increases in market value" are a somewhat dubious component of "overseas lending". During 1955 and 1956 reserves were reduced, mainly for financing the Development Programme.

Grants from overseas include Mutual Security Agency grants and Colonial Development and Welfare grants. The former stood at $294,000 in 1952 and $717,000 in 1953. Loans are loans raised under the development schemes, approximately 70 per cent of the total loans were raised overseas, the remainder being subscribed locally.

The information on short-term movements of bank funds was obtained from the December consolidated balance sheet for all banks in each year.

Government short-term movements include movements in the Joint Colonial Fund and the Currency fund. No figures for private short-term balances, other than bank balances were available, but it is believed that the errors and omissions would be accounted for mainly by such movements.

The direction of trade of British Guiana has not altered greatly during the period, as is shown in Table 58, the only observable trends being a slight increase in trade with "other" countries and a fall in the trade with Canada.

The terms of trade index which expresses the ratio of export prices to

TABLE 58. PERCENTAGE DISTRIBUTION OF TRADE, 1952-56

Countries	1952			1953			1954			1955			1956		
	Imports %	Domest. Export %	Total Trade %	Imports %	Domest. Export %	Total Trade %	Imports %	Domest. Export %	Total Trade %	Imports %	Domest. Export %	Total Trade %	Imports %	Domest. Export %	Total Trade %
United Kingdom	41	36	39	49	40	44	47	37	42	48	36	42	45	32	38
Canada	16	46	30	14	36	26	10	40	25	6	36	21	8	40	24
Other Commonwealth	17	10	14	17	14	15	16	13	15	18	16	17	17	13	15
U.S.A.	16	7	11	11	8	10	14	8	11	13	9	11	13	11	12
Other	10	1	6	9	2	5	13	2	7	15	3	9	17	4	11

import prices, may have an important effect on the real income of a country. Clearly if a main export product rises substantially in price whilst the price of imports remains constant, the exporting country gains a substantial increase in real national income. In many primary producing countries since the war real incomes have increased very significantly through increases in the prices of primary products exceeding the increases in the prices of consumer goods. Far too little attention has been paid to the measurement of the terms of trade in primary producing countries because such price changes are of much greater importance in the determination of income levels than are such factors as the level of domestic investment which is often the main determinant of income levels in developed countries.

One of the problems of constructing a terms of trade index for underdeveloped countries is the problem of evaluation of imports. On the exports side exact quantities and values are usually obtainable and a fairly good index can be constructed. On the imports side however, volumes of many goods are not entered in the returns or are not strictly comparable. It is important that customs entries endeavour to include as much of this information as possible so that a reliable index of the terms of trade can be computed.

An export index was constructed for British Guiana which included the following goods: bauxite, sugar and rum, timber and lumber, rice and gold. In 1956 these exports accounted for 94 per cent of the export trade, so that an export price index based on them can be considered of high reliability. The import price index however accounted for only 28 per cent of total imports owing to the difficulty of obtaining details of volumes imported. Thus the index shown here must be treated with reserve. Although the export side is accurate the imports side is thought to show a rather greater fall in price than was general for all imports during the years 1952-54. Examination of import prices does however show a small decline in many prices between 1952-54 and a small rise in prices between 1954-56. The index of the terms of trade is of the type $\frac{P^1Q^0}{P^0Q^0}$ where P^0 equals base year prices, Q^0 base quantities, P^1 first year prices, P^2 second year prices. 1952 is taken as the base year in the index shown in Table 59 but if the index is continued and expanded it would be better to take an average of three years as the base year. The indices are shown in Table 59.

Table 59. Indices of Import Prices, Export Prices and the Terms of Trade

	Export Prices	Import Prices	Terms of Trade
1952	100	100	100
1953	104	84	124
1954	100	81	122
1955	101	89	113
1956	110	98	112

The terms of trade thus moved in favour of British Guiana during the period. Even if a bias is allowed for, it is clear that the economy benefited from this position.

These indices should however only be considered as very broad estimates. Although the export price index has a wider coverage its accuracy is reduced by the fact that the export values given to bauxite are to some extent arbitrary. Since most bauxite is produced by companies who also produce aluminium, it is difficult to arrive at a value for the raw material which would correspond to a world market value. In this study the value shown in the British Guiana trade returns has been used.

CHAPTER XI

An Estimate of Changes in Real National Product

All the figures presented in this report are in money terms; that is to say output is valued at the current prices fetched by that output, and expenditure is money expenditure and does not include any changes in the purchasing power of money.

Clearly any increase in the national income or national expenditure includes two components. Firstly, there may be an actual physical increase in output and values may rise for this reason *(21)*. Secondly, there may be an increase in prices which will also inflate the value of the product. An increase in the gross domestic product may be the result of both or one of these forces operating.

On the expenditure side, total expenditure may increase because a greater volume of goods and services was purchased or because prices of goods and services have risen. There are thus two methods of approaching this problem of changes in the "real national income": one *via* output and the other *via* expenditure; only in a closed economy would the two indices necessarily change in the same proportion. In an open economy the terms of trade will also have to be taken into consideration before changes in the two index numbers could be reconciled.

The exact measurement of changes in the real geographical product of the economy would involve using a great deal more data on inputs (and outputs) than were available for the present study. A proper study of this problem involves estimating changing values of inputs as well as outputs, and in the service industries the computations are even more complicated since it is necessary to relate factor shares to real services performed. The problem of estimating the increment in real services performed by doctors during an epidemic is an example of the kind of conceptual problem involved.

Only the crudest index of real output can thus be included for British Guiana. This is considered however to be quite a good indication of the real volume of production relating to certain important goods. The goods measured are rice, coconut, timber, bauxite and sugar products. They account for 36.6 per cent of the gross domestic product at factor cost. Weights are derived from the proportion each industry contributes to the gross domestic product. The results are shown in Table 60.

For the other industries, not included in this index, we can only speculate as to the real increase in output during the period. As the number of vehicles and other transport facilities increased and expenditure on transport also increased it is considered that this industry increased its real output significantly – probably by 20 per cent. As regards many service industries, how-

TABLE 60. VOLUME OF PRODUCTION INDEX

Commodity	Weight a	1952 a X 100	1953 index(1)	(1)X a	1954 index(2)	(2)X a	1955 index(3)	(3)X a	1956 index(4)	(4)X a
Rice	6.1	610	118	720	116	708	131	799	113	689
Coconut	1.3	130	99	129	104	135	104	135	100	130
Timber	2.6	260	100	260	121	315	125	325	124	322
Bauxite	11.6	1160	95	1102	97	1125	102	1183	103	1195
Sugar	15.0	1500	100	1500	99	1485	103	1545	110	1650
Total		3660		3711		3768		3987		3986
Index		100		101		103		109		109

ever, it is considered that the increase in national income was at least as much monetary as real. The estimated increase in the real product during this period is thus estimated to lie between 8 per cent and 12 per cent. The money national income increased during the period from 100 to 130. It is then estimated that roughly two-thirds of the increase was of a monetary nature.

On the expenditure side we can only make a rough estimate from the cost of living index as to the change in real and money expenditure. This index is relevant to consumers' expenditure only.

The two indices below compare (a) Total Consumers' Expenditure; and (b) Changes (average) in the Cost of Living Index for the period.

TABLE 61. CONSUMERS' EXPENDITURE AND COST OF LIVING

	1952	1953	1954	1955	1956
Index (a) Consumers' expenditure	100	105	111	112	122
Index (b) Cost of Living	100	100	104	105	107

Although only the crudest comparison can be made of these two indices, it would appear that the increase in real consumption would be in the nature of 14 per cent during the period. This "real" index thus has a greater increase than that of output. The movement in the terms of trade in British Guiana's favour (see Table 59) would in fact lend support to the assumption that the increase in purchasing power was greater than the increase in real output.

PART III

CHAPTER XII

GOVERNMENT POLICY AND DEVELOPMENT

Recommendations of the International Bank Mission

During the period 1946-1952 government investment for development purposes equalled about $28 million. This amount was distributed broadly under main heads of expenditure as follows: three major drainage and irrigation projects, $6.5 million, social welfare, justice and public buildings, $11.2 million, and the remaining $10.3 million on mainly economic programmes such as agriculture, forestry, transport surveys and research.

In 1951 a mission of the International Bank for Reconstruction and Development made a report *(13)* on the economy of British Guiana in which a five-year development plan for the years 1954-58 was presented. The major sector of expenditure and amounts of expenditure recommended are shown in Table 62.

TABLE 62. DEVELOPMENT EXPENDITURE RECOMMENDED BY I.B.R.D. 1954-58.

	$ 000	%
1. Agriculture		
(a) Drainage and irrigation projects	10,780	16.4
(b) Land settlement	1,150	1.8
(c) Rice development corporation	5,000	7.6
(d) Other agricultural projects	1,106	1.7
(e) Research and surveys	2,251	3.4
(f) Agricultural credits	4,200	6.3
2. Total Agriculture	24,487	37.2
3. Transport and communications	22,304	33.9
4. Forestry	2,280	3.5
5. Social welfare	7,450	10.9
6. Public works (including sea defences)	5,450	8.5
7. Industrial credits	1,500	2.3
8. Hydro-electric power	1,440	2.2
9. Surveys	400	.6
10. Credit corporation	600	.9
Total	65,911	100.0

The International Bank Mission report noted that "a continuing high level of domestic investment is essential to maintain or increase the present standard of living" (p. 23) because of the increasing population. The investment programme recommended for 1954-58 aimed to increase the national income by 20 per cent and the income per head by 6 per cent in the five years (it was not stated whether national income was expressed in real or money terms). The programme had four principal aims which were essential to this objective (p. 23):

1. To strengthen, as rapidly as the technical resources of the colony permit, those sectors which appear most urgently in need of improvement in order to provide better balances in the economy.

2. To provide for continuing progress in those sectors where the economy is already strong.

3. To provide a programme of technical research and experimentation in agriculture and related fields as well as soil, geologic, hydrographic, and other surveys as a prerequisite for the development of the colony's resources, both during the next five years and after.

4. To stimulate local savings and local investment, both public and private, in order to reduce the dependence of the economy on external capital inflows and external grants.

Of these aims, numbers one and three have received the greatest attention from both the I.B.R.D. report and the subsequent development expenditure. Aim 2 is somewhat difficult to understand, since, except possibly in the bauxite industry, the economy of British Guiana cannot be considered strong in any sector relatively to parallel sectors in more developed countries. Aim 1 is also stated in somewhat confusing terms since the aim of strengthening those sectors most "urgently in need of improvement" may be a different aim from providing "a better balance in the economy". The peasant farming sector for instance, was justifiably considered a sector to be in need of strengthening, but the use of a large part of the available capital for strengthening the monoproduct (rice) economy of this sector may have precluded investment in diversification which would have provided a better balance in the economy. Thus of the four principal aims of the Bank's development programme only aims 3 and 4 are entirely unambiguous and clear in their intent.

To some extent the pattern of recommendations set out by the Bank follows the pattern of development started in British Guiana under the previous Development and Welfare schemes. Two major drainage and irrigation schemes had already been started, the need for better communications was already considered a priority item. Thus the Bank's report served mainly to justify the type of development expenditure to which British Guiana was to some extent already committed. In particular, the Bank's report emphasized the prevailing tendency to concentrate development on the expansion and improvement of the coastal land. The immediate objectives as regards the interior were seen to be in the form of more surveys of agricultural and mineral possibilities rather than actual investment. The Bank's report states "At least in the short run, therefore, development must take place primarily in the coastal area". The mission however, recognized the scope for improvement in the lumber and beef production industries (p. 14). The mission rejected the idea of a special commission to promote the development of the interior: it says "The development program for the area should be regarded by the government as an integral part of the over-all program. A special commission would serve only to emphasize the conflicting rather than the common interests of "the Seawall" and "the Bush" " (p. 40).

The interests of the interior are however of a differing kind from those of the coast without necessarily being in conflict, and may call for a specialized approach. It would however be seen that one of the weaknesses of the Bank's Report and of the subsequent development expenditure has been the tendency to draw sharp lines of distinction between the "interior" and the "coast" as if all areas in British Guiana must fall in one of these categories. More attention might, for instance, have been given to planning the development of access communications such as the gradual construction of roads as ancillary communications to rivers, and thus benefiting the riverain lands which already receive attention from private investment.

Development Schemes, 1954-56

Table 63 shows the allocation of development funds during the years 1954-56. It should be noted that there is some overlapping on the margin between some of the projects. In this classification sea defence has been included in drainage and irrigation.

So far the expenditure has departed little from the general pattern advocated in the I.B.R.D. report. There has however been a slightly higher outlay on drainage and irrigation and land settlement in the agricultural sector.

The expenditure recommended under "other agricultural projects" has been slightly expanded. This has not, however, materially helped the diversification of the economy. The livestock industry has benefited more than other individual branches of agriculture, the only other significant expenditure under this head being for rice schemes.

The figures in Table 63 tend to obscure to some extent the enormous bias towards the rice industry which has characterized both the Banks' recommendations and the actual expenditure. About 80 per cent of the expenditure under agriculture will be of benefit mainly to the rice industry, the other 20 per cent benefiting mainly cattle and sugar. Under the non-agricultural schemes, there is also considerable expenditure geared towards this one industry: much of the road building being situated in areas of rice development, and housing credits have been supplied to rice farmers. All in all, it is felt that it is no exaggeration to say that about 40 per cent of the total expenditure under the schemes will benefit no industry but rice production in the immediate future. The remaining 60 per cent of total expenditure is directed partly towards social welfare and other non-economic projects. This tendency towards specialization in expenditure makes it relatively easier to predict the effect of such investment on the economy than would be the case if there was an emphasis on diversification. It is of course impossible to predict exactly how much the output of rice will be increased by the development schemes but an increase of 20-25 per cent in total output has been aimed at. This could not, of course, be expected to result until the completion of the schemes after 1959.

Assuming an increase in output of 25 per cent to occur, with no significant

TABLE 63. EXPENDITURE UNDER DEVELOPMENT SCHEMES, 1954-56.

Item	1954		1955		1956	
	$000	%	$000	%	$000	%
Drainage and irrigation	2,064.2	24.6	2,939.1	14.9	4,013.7	19.5
Land settlement	168.3	2.0	276.3	1.4	540.3	2.6
Rice development corp.	—	—	—	—	85.6	.4
Other agriculture	424.3	5.1	560.0	2.9	1,261.4	6.2
Agricultural credit	153.0	1.8	1,790.0	9.2	1,100.0	5.4
Total Agriculture	2,809.8	33.5	5,565.4	28.4	7,001.0	34.1
Transport and communications	2,722.7	32.5	5,559.5	28.4	4,609.6	22.4
Forestry	178.3	2.1	110.2	.6		
Social welfare	914.8	10.9	3,076.9	15.6	4,356.6	21.2
Public works	721.9	8.6	943.8	4.8	2,080.3	10.1
Hydro electric power	—					
Surveys	306.8	3.7	540.3	2.8	417.6	2.0
Industrial credit	714.3	8.7	3,798.0	19.4	2,093.0	10.2
Total	8,368.6	100.0	19,594.1	100.0	20,558.1	100.0

changes in costs and prices as compared to the period 1953-56, we could expect an increase in factor incomes of $2,481,000 in the rice industry (including milling and marketing) and an estimated increase of approximately $500,000 in factor incomes of industries immediately serving rice production (mainly transport and the machinery repair and hire industries). Assuming a continuing rate of growth in the gross national income, this investment in rice should thus yield an increment of approximately 1.3 per cent in the national income by 1960.

Viewed purely from the economic standpoint this is an extremely low return for the capital outlay. It must also be remembered that this 1.3 per cent increase in the national income equalling a possible $3 million, represents payments to labour and land as well as to capital. If it be assumed that 40 per cent of the total development expenditure has been allotted to rice, in the three years 1953-56 approximately $19 million has already been spent on this sector. A return of $3 million per annum would appear to be a fair return on capital alone, but by the time paid labour and small farmers have received remuneration for work done, profit in rice industry is negligible, as was illustrated in the costing study of rice farms made in conjunction with this survey in 1956.

Most of the expenditure has taken place by means of free grants, and interest will not be necessitated. Nevertheless it is a good measure of the economic soundness of a project to estimate its ability to make a return on investment. It seems evident that the rice industry in British Guiana would not find it possible to service the investment, had it been in the form of a loan to the industry rather than a grant.

During the period in which the investment is taking place, incomes will be increased as a direct result of the capital expenditure. It is estimated that factor incomes in construction and allied industries have increased in the first instance by 55 per cent of the actual capital expenditure. Thus for the three years 1954-56 approximately $10.4, or an average $3.5 million a year, has been

created in new incomes by the expenditure on rice schemes. The size of the investment multiplier cannot be estimated with any exactitude in British Guiana but as the marginal propensity to import is very high it is not considered to be great. The conclusion is that the increased incomes from rice production resulting from the investment will barely compensate for any decrease of incomes in the construction sector when the investment is completed, unless of course the rate of investment expenditure is maintained and increased.

It is not easy to comment on the income-creating potential of such investments as roads, surveys and communications. Nevertheless this kind of investment is certain to be fruitful in the long run, providing it is wisely planned. Although expenditure on drainage and irrigation may not have a very high income-creating potential so long as rice is the main crop, it may be that more profitable use will eventually be found for the land on which this expenditure has been made.

Although housing loans are often considered as non-productive capital, they can, to some extent, contribute to the expansion of income. So long as there is a flow of credit-worthy applicants for housing loans, the fund will continue to revolve, employment in house-building and repair will at least be maintained, if not increased, and local saving will be stimulated. Thus in the first thirty years, if the fund revolves three times, the initial grant will have been matched by approximately twice as much of local saving. It is not entirely true that the capital resulting is non-productive, as apart from direct incomes being created by letting, house ownership releases more of the personal income for other expenditure which may stimulate other local industries. The increase in land values arising out of expansion in building, moreover, may lead to concentrations of wealth and expansion of domestic saving.

All in all, however, it must be concluded that the Development programmes outlined by the I.B.R.D. and put into effect by the government are extremely low in income-creating potential. We should probably look for social rather than economic reasons in the emphasis on expanding rice lands for underemployed labour, but it is evident that this type of farming is unlikely to bring about that kind of income growth which is the object of economic development, and it must be regarded as much as a social relief measure as an economic development measure.

An Empirical Approach to Development Planning

The purpose of this study is to present facts rather than to make recommendations. It is however felt that in so far as the findings of the statistical study can be interpreted in the light of particular problems this interpretation should be attempted. By the use of such information augmented by more specific information on costs of production and market situations, a more scientific approach can be made towards the problem of planning for

development. In particular, a global and empirical approach can be made to the allocation of available capital and to the problem of attracting capital.

In the report made by the I.B.R.D. a strong emphasis was given to government expenditure on basic services such as drainage, roads, power and other utilities rather than on investing directly in productive enterprises. This is of course in line with the practice of government providing basic services whilst leaving it to private capital to invest in actual enterprises. Unfortunately it is not always true that public expenditure on utilities is immediately followed by private investment in industries utilizing those services. In some cases an intermediate stage is necessary in which private capital must be wooed and marketing arrangements must be made for the products. This is particularly true of agricultural industries.

The problem basically falls into two parts. Firstly, the allocation of funds for basic services and secondly the attraction of private capital into productive lines, possibly new industries, in which full use can be made of the services. If expenditure on basic services is not followed by productive investment the recurrent charges caused by the basic expenditure simply become an extra burden on the economy.

The figures in Table 5 give some indication of the important part which transport plays in British Guiana, and justifiably, the I.B.R.D. report, as well as subsequent allocation of development funds, have given attention to transport and communications. Both the I.B.R.D. and the subsequent development expenditure have taken what might be considered a piecemeal approach to this problem. "The coast" is considered separately from "the interior", road and rail transport are not related to river transport. There has been no attempt to investigate by means of statistical surveys the relative cost of moving heavy goods by rail, road or water. In the I.B.R.D. report there is no discussion of the river system which has long been British Guiana's chief medium for heavy and light goods transportation.[a]

It nevertheless remains of great importance to the economic development of British Guiana that the place of the rivers and the riverain lands be assessed. The future of all types of transport depends on their relative costs and the road building programme should be considered in the light of its complementarity to the development of rivers and in some districts of air transport. The I.B.R.D. mission has tended to neglect also the development of the riverain lands adjacent to the main rivers. It is not entirely true that the navigability of the rivers is seriously affected by rapids except on the Essequibo-Cuyuni-Mazaruni river, and on the Cuyuni lengthy navigable stretches above the rapids are utilized by the logging industry. On the

[a]"A few miles inland the rich alluvial mud of the coast gives way to infertile sandy soils covered with dense hardwood forests. Numerous rivers, chief of which are the Essequibo, Demerara, Berbice and Corentyne, lead to the interior. Their value as a means of transport is limited however by rapids 30 to 110 miles upstream and their wide estuaries which cut the coastal strip into four sections create special transport problems" (p.4). Thus the river system is disposed of as being mainly of nuisance value and the rivers are only given the barest passing mention in the other sections of the book.

Demerara, Berbice and Corentyne rivers rapids do not occur within 60 to 130 miles from the source, and even 80 miles of navigable river may well be a valuable communication to many hundreds of square miles of countryside, particularly if, as in the case of the Demerara, a long stretch is navigable by ocean-going freighter, thus eliminating the need for transhipping products from the interior at coastal ports. To tackle the transport problem in a piecemeal fashion could lead to wasteful duplication. A proper assessment of present communications and their development in relation to each other can prevent wasteful expenditure.

The problem of location of development is closely associated with the transport problem. If communications are seen as a basic service which should be provided by government with a view to attracting private capital, there is a strong argument for paying particular attention to those locations in which private enterprises already seem to be interested. An instance of such a region is the east bank of the Demerara between Georgetown and Atkinson Field, the undulating land near to Atkinson Field and even to a lesser extent the river lands between Atkinson field and Mackenzie. There is some evidence that private enterprise favours these locations and this may ultimately result in a "path" of development stretching from Georgetown to Mackenzie and including some of the lands on both sides of the river. From Mackenzie a communications link with the ranching area could be strengthened through the improvement of the cattle tracks. This is however looking ahead, and the example is given only to emphasize the importance of considering the location of development and its relation to the transport system and to the probability of private capital favouring any one district rather than another. There are of course other districts in British Guiana which might compare with the Demerara riverain areas in this way, but it is probable that for any development producing for the domestic market, accessibility to Georgetown will remain important.

Transport costs are high in British Guiana. Table 5 shows that 6.5 per cent of the gross domestic product represents incomes created in the transport sector. Rail, wharves, and water transport contribute approximately the same as road transport. In 1956 a total of $23 million was spent on internal transport. The costs of transport appear high in the expenses of business firms and owing to the condition of the roads wear and tear on vehicles is high.

Water control has rightly been considered of priority in development projects. Public expenditure on drainage and irrigation must be considered in the light of the economics of the crops which it is planned to grow. When land involves much capital expenditure before it can be made productive, it is not generally economic to grow on that land products for which returns per acre are low. Some crops, for instance coconuts and even citrus, although they may yield a high overall profit, do not generally yield a high profit per acre. Tree crops however, may not need such expensively drained and irrigated land as other crops. The problem of water control cannot be con-

sidered in isolation from the general expansion of the agricultural economy. Statistical analysis could be made of the returns to different crops in varying conditions and this may indicate relative costs of production. A land census, either in relation to all agricultural activities or to specific crops, provides useful information on which planning can be based. Such a census is not the same as a land use survey which shows only how existing cultivated land is being used, it includes also a census of land resources showing how specific areas of land could be used and the estimated amount of capital investment necessary to utilize certain land for a range of different crops. It would for instance, probably be found that coconut could be grown profitably on poor sand reefs which are self-draining. The return per acre to coconut in such conditions may be relatively low but such land is comparatively cheap and the net return to capital invested may be much higher than is the case if coconuts are grown in areas of expensive drainage projects. Similarly with citrus, information should be obtained on actual returns on different land conditions before it can be categorically stated that such a crop is suitable or unsuitable for production in British Guiana on a large scale.

Even if production conditions are favourable, however, and government provides certain basic services, it does not necessarily follow that private enterprise will cause production to take place. This is particularly true of small farming. Although production for the local market may be stimulated by local action such as the setting up of markets, and the improvement of transport, it is unlikely nowadays that a large export market can develop for a peasant crop without vigorous action being taken by a central authority. Small farmers will not suddenly expand their production of a given cash crop unless they know a market exists. But an export market will not exist for that country unless a given level of production is ensured. The larger consuming markets buy, nowadays, on a large scale basis. Special shipping and marketing arrangements have to be made if fruit and fresh meat are to be exported to these markets. That this co-ordination of production and marketing can be achieved is instanced by the fact that islands in the Windwards have recently entered the banana market.

The diversification of the agricultural economy thus requires a global approach to the problem of production and marketing for each specific crop. The economic information required is as follows:

(a) the costs of production of the crop or product and the scale on which it could be produced;

(b) the availability of markets, the prices prevailing and the scale of production necessary to produce for (i) the home market (ii) the inter-Caribbean market — i.e. Barbados — and (iii) the world market. This necessitates seeking actual assurances from marketing firms overseas that the product will be purchased and shipping facilities will be provided (as in the banana case);

(c) the public expenditure necessary to stimulate the desired expansion of production. This may simply take the form of distribution of seeds, fertilizers, market information and technical knowledge; it may involve government marketing, or at the other extreme, it may involve actual production on government-owned estates, at least until such time as the export market is established and appears to be relatively secure.

These remarks apply too, not only to agricultural production but to the introduction of new processing and manufacturing industries. It is common in British Guiana to hear people express surprise that there is not a china clay industry, a glass industry, a paper industry and a number of others utilizing certain raw materials. Here again it is necessary to obtain more information both on production and the market situation and to get this information into the hands of potential overseas investors. Local knowledge of skills, techniques, and markets for manufacture is generally lacking and it may be desirable to approach overseas firms already established in the trade with a view to setting up a local subsidiary with, if possible, the participation of local capital. Such overseas firms and other types of potential investors are usually ignorant of the conditions prevailing in small countries such as British Guiana and it is usually necessary to seek out and approach such investors and provide them with as much statistical material as possible. Unless this is done foreign firms may remain in ignorance of the opportunities, and their money may never come into the country.

Such market and cost surveys can only be undertaken by government and may be the means of bringing some degree of diversification to the economy and of securing some returns to the capital invested in basic services. Some of the small islands have found it worth their while to employ an officer with business experience and "selling ability" even although this usually means paying a salary above that of the ordinary civil servant in order to attract such an officer from the business world.

It is not intended to list here the industries which (according to various authorities) British Guiana should be able to develop. The intention of this chapter has been to summarize very briefly what may be termed the global or statistical approach to development planning. This approach emphasizes the fact that each type of investment, particularly public investment, must be viewed as a link in the chain of economic development rather than as a single project in isolation. It emphasizes the need for the collection of as much information as possible on the economics and marketing of various products. The provision of basic services is related to the production of specific goods and services, communications are related to location of industry and production is related directly to the marketing problem. It also demands an active rather than a passive approach to the marketing problem. It is not considered to be particularly relevant to the main export industries of sugar and bauxite since the production and marketing of these products is

co-ordinated by the companies concerned, but it may be noted that the output of sugar and bauxite in their primary states is likely to be limited by market conditions or international agreements and that the expansion of these industries may involve vertical growth into the processing and manufacturing stages. If this should occur the above remarks on diversification of the economy may also apply to these industries.

CHAPTER XIII

The Future of National Accounting in British Guiana

Development of Statistical Services

Smaller, underdeveloped countries are not always in a position to produce national accounts or national income statistics. The governments of such countries may not have the staff or facilities to do this work even although they may recognize the need for such basic statistics and the desirability of their being prepared by the government rather than by an outside body. In British Guiana the government has recently set up a statistical bureau and employs a statistician qualified to do this work. The aim of the present study was not only to make estimates for the years 1952-56 but to assist in setting up the machinery by which the series could be continued by the British Guiana Government. It has been considered worthwhile summarizing some of the organizational problems since much of the subject is of direct relevance to national accounting in underdeveloped countries.

Two types of statistical departments may exist in a country newly setting up this service. Firstly, a fully fledged department may be set up. Such a department might handle a great deal of the statistical computing previously handled by other government departments. In the extreme case it might even handle the trade returns, agricultural censuses and the like. The second type of department is in essence a bureau. It does not generally take over the statistical functions of other departments, but serves as a clearing house. It may prepare statistical surveys periodically in which it will draw heavily on returns prepared in other departments. It may (or may not) prepare index numbers. It is almost certain to have the responsibility of preparing national income estimates, but since these estimates must be based on statistical material emanating from a number of other government departments it will have to have a certain amount of control over the type of data issued by other departments and will act in an advisory capacity to other departments in the preparation of their routine returns, and perhaps more particularly when special sample surveys and censuses are required.

The establishment of a "bureau" rather than a "department" may be viewed as a stage in the development towards the ultimate establishment of a fully fledged "department". It may be argued however that such a view is incorrect. Although a number of the larger underdeveloped countries have tended to follow the path from a bureau to a department in the intermediary stages of their development they are almost certain to be faced with the need for decentralization once a certain, further stage in their development is reached. Thus, up to a point, the statistical department may

handle trade returns, inland revenue statistics, cost of living surveys and agricultural censuses but after a certain stage in a country's development these activities become part of the routine work of the government department concerned. This is illustrated by the systems in such countries as the U.K., U.S. and other developed countries whose central statistical offices, although large organizations, are much more on the lines of a bureau than a department. In those countries other government departments, many of which have their own statistical sections process their own material and pass it on to the central statistical offices.[a]

Thus the development of statistical services in a country may well take the form of developing statistical units in other departments under the general supervision of a statistical bureau rather than the centralization of all statistical work in one office. In the remarks which follow it is assumed that this will be the tendency in British Guiana. Of course the degree of participation by the statistical bureau in departmental statistical work may vary as needs dictate. This is something which can only be settled by those immediately concerned with each situation as it arises.

The main sources of statistical data for the national income are discussed in Chapters V - XI and it is not intended to detail here the sources, governmental or private, on which the estimates are based. It is felt to be worthwhile however to outline the type of statistical information which government departments can most usefully furnish for national income purposes.

Income Tax Department

Income tax information is probably the most vital for national income purposes. Although only a minority of the population may be taxpayers the values involved include a major part of the values in the main national income aggregates. It may be considered desirable, moreover, that for reasons of secrecy as much processing as possible be done in the department itself. The annual statistical returns furnished by income tax departments do not as a rule give information which is of great value to the national accounts, and further analysis of returns becomes necessary when national accounts estimates are being made. In a country the size of British Guiana it is felt that one fairly experienced statistical clerk could produce both the routine statistics and the material necessary for the national accounts. It is quite likely that during the initial phase of national accounting considerably more supervision by the statistical bureau would be necessary than later on, once the routine has been established. It is also important to mention that the amount of work involved increases as the number of taxpayers increases and that although one clerk might be able to cope with the present amount of work, a stage may be reached when, even with a certain amount of sampling, assistance would be required, at least with the actual computing.

In the 1952--56 study, all income tax returns relating to business were

[a]However, the Central Statistical Office in the United Kingdom has tended to take over more functions previously carried out by departments of government in recent years.

aggregated for the year 1954. For the remaining years all company returns and a sample of enterprises were totalled. A comparison of the results indicated that it would only be necessary, in future years, to analyse a sample of the smaller firms in the distributive trades. The following procedure is recommended for the analysis of income tax returns:

Companies

It will be necessary to analyse at least in part all company returns for each year. The following data should be abstracted, mainly from trading accounts, and profit and loss accounts:

(i) Distribution Companies. Total revenue from sales, other income (code as rent, interest profits etc.); stocks (end year), wages and salaries paid, rent paid, interest paid, purchases, transport, other expenditure (by residual); stocks (beginning of year), net profit, tax paid, dividends paid.

(ii) Manufacturing, Processing and Mining Companies. Total sales, stock out, wages and salaries, rent paid, interest paid, other expenses, royalties, stocks in, net profit, tax, dividends.

(iii) Sugar Companies. Total sales, (export and local) of rum, sugar and molasses, stock out, wages and salaries, other costs, stock in, net profit, tax dividends. Many sugar companies accounts divide expenses in terms of processes of production. Cane growing expenses should be separated from processing expenses.

(iv) Other Companies. Sales, stock change, salaries and wages. Net profit, tax and dividends are the main items which should be abstracted.

For the time being it is suggested that no abstractions should be made from balance sheets, as the value of the data is very limited, unless a great deal of sub-classification is made. It might, however, be considered to be worthwhile later to develop the study of balance sheets as a further source of capital formation data.

Unincorporated Businesses

The majority of unincorporated businesses are retailers. A large amount of the retail business of the country in value terms is covered by accounts of distribution companies, plus 20 to 50 of the larger unincorporated businesses. The sample of 20 to 50 does not have to be representative in any particular way as in any case many smaller businesses are not represented in income tax returns at all. The purpose is to gain information on general increases or decreases in sales. It is thus important that as far as possible the same stores should be included each year. Items abstracted should be the same as for companies (excluding of course dividends). It is noted that the income tax department already maintains information of this kind, relating to groups of stores. It is recommended that data be added in groups of 10 stores. This enables dispersions in the data to be tested. It also makes it possible to allow for any possible changes in a group due to one store being removed and another added.

The treatment of unincorporated businesses, other than retail stores, will vary according to the nature of the business. Where the number involved is small, it may be possible to include all businesses making returns, at least with a minimum analysis including sales, wages paid and net profit. Certain industries are composed of a relatively small number of fairly large firms; the coconut oil milling and saw-milling industries are examples. It is suggested that a complete coverage of these firms be made, showing sales, stock changes, wages and salaries paid, rent paid, interest paid, purchases and other expenditure, net profit, tax paid. For transportation firms, fuel, which is a major item, should be shown separately from other expenditure. For bus transport it was found useful to identify the receipts and running costs attributable to a stated number of vehicles as this can be related to the registration statistics.

Amalgamation of Statistics to Preserve Secrecy

It is assumed that the Statistics Bureau would have access to returns during the formative period but that the ultimate aim is full processing in the Income Tax Department. Where possible, totals for distinct industries should be prepared by the income tax statistics clerk under such headings as, for instance, "8 unincorporated enterprises in the vegetables oil processing industry", or, "6 unincorporated sawmills plus one saw-milling company", as the case may be. Company totals can thus be added to the totals for unincorporated businesses for the industry concerned.

It is suggested that the distributive trades totals be prepared under the following sub-totals: (a) sub-total for the main distributive companies, (b) a series of sub-totals for groups of (say) six unincorporated businesses, the groups to be as far as possible uniform from year to year. Groups could be classified by turnover, i.e., a group of 6 businesses of turnover $10,000 per annum and less, 6 businesses of $10-20,000 turnover, 6 businesses of $20-50,000 turnover and 6 businesses of $50-100,000 and so on.

All manufacturing businesses could be amalgamated (companies and unincorporated businesses). Processing (if this distinction is used) includes rice-milling, coconut oil manufacture and sugar and rum making. Thus cane growing operations can be amalgamated with agriculture and the processing of sugar can be amalgamated with other processing, so preserving secrecy of sugar accounts. The actual industrial group may be determined in consultation with the Statistics Bureau.

The work involved in the above operation involved (a) maintaining a sample of retail unincorporated businesses (this is already done for the Income Tax Department's own purposes); (b) analysing all company accounts; analysing about half non-retail unincorporated business accounts.

Salaries

Salary lists are returned by employers. These lists also include a number of wage earners, and where the occupation is unstated or does not determine

if the income recipient is a salary earner, an annual income limit will have to be decided which demarcates salaries from wages. As there are gaps in salary information, care must be taken to see that all employers' returns are included. It is suggested that a table should be drawn up showing name (or number) of employer down the vertical column and totals of salary paid for each year in horizontal rows. Thus, it will be possible to see if lists are incomplete. The wage information from these lists, being incomplete, can probably be disregarded. In sugar cane growing salaries should be distinguished from processing totals.

Insurance Companies

Information needed for national income and balance of payments includes (a) premiums paid; (b) claims paid; (c) local expenses. This information is not always available from income tax returns and it is suggested that special enquiry should be used. In the case of local insurance companies however, this information may be available from returns. It is also necessary to abstract changes in the value of securities held classified as local and overseas securities.

Depreciation

Final wear and tear allowance granted is found on the assessment form and the figure allowed by income tax should be used. Depreciation in the national accounts may differ from this figure.

Net Profit

Net profit is the taxable profit less deductions made for losses in the previous year. For national income estimates an adjustment must be made so that actual profit recorded in the accounting year is shown.

Triplicate Assessment Forms

A system of triplicate assessment forms has recently been introduced in the Income Tax Department. These forms provide information on dividend income, property income and depreciation. The remaining information on them is of more value to inland revenue statistics than to national income work. They may, however, be used as a substitute for the more detailed analysis in the case of professional enterprises (i.e., lawyers, doctors, dentists). It will still however, be necessary to carry out an analysis of actual accounts for other enterprises.

The income tax data is likely to prove the most difficult to organize and it may take time to establish the routine by which regular statistics are forthcoming. Other departments may not find it so difficult to synchronize their ordinary statistical output with that necessary for national accounts. From the Labour Department the national accounting machine will require in the main the following information.

Wage Rates and Earnings

Actual wage rates are not of particular value to the national accounts unless they can be related to hours worked and hours to earnings. The most useful figure for national accounting purposes is a "total wages bill" for each industry. This may be derived from figures of wage rates and hours worked only if details of overtime hours and pay, business and other earnings are included.

Prices

Labour Departments usually collect regularly information on price changes of goods consumed by working class families. This information will be available to the national accounting organization and may be utilized in estimates of change in consumer's expenditure.

Budget Surveys

Family budget surveys will normally be made periodically by the Labour Department and the Statistical Bureau working in collaboration. These surveys are extremely valuable for estimating a breakdown of the expenditure side of the national accounts. When preparing the questionnaire national income needs will be borne in mind. On the other hand it is not at all clear from past results whether questions on incomes should be included in these surveys, or, if they are included as a broad check on the expenditure, whether they can be considered of sufficient reliability for national income purposes.

In general it follows that the most useful contribution which the Labour Department can make to the routine estimates is as much data as possible on total earnings broken down into the industrial classification used in the national income estimates.

Agricultural Surveys and Censuses

The Agricultural Department may be the sole source of data on outputs of various commodities. This is particularly true of food crops and less important cash crops. Statistics of rice and sugar may be more easily available from companies or marketing organizations.

Surveys and censuses may be taken annually or less frequently. It may be necessary to enumerate a large number of holdings to get reliable estimates of quantities of production of various crops for the colony as a whole. It is not always possible to obtain experienced enumerators in large numbers and it has been found, for national income estimates, the most reliable basic surveys are essentially simple ones which concentrate on obtaining quantities and yields from a large number of holdings.

The basic surveys covering a large sample of farms would then be supplemented by economic surveys. They relate (a) to a particular crop; or, (b) to a type of holding. They can be expanded in number so that economic conditions over the colony can be well represented. They require much more experienced enumeration than the "output" type of survey, but the

number of farms visited and enumerated is much smaller. The questionnaire includes questions on costs of production, receipts, capital, credit and other economic information.

The Agricultural Department may regularly collect ex-farm prices for various commodities. These have two uses in the national income estimates: (a) the revaluation of outputs; and (b) in comparison with retail prices for the same product, estimates of margin between growers' and consumers' prices can be made.

It was found during the present survey that much additional information was sought from the Agricultural Department at various times. The main sources of information were however agricultural surveys and censuses.

Other Sources

From the Forestry Department, the Fisheries Division and the Lands and Mines Department the most useful information will be figures of total outputs and where possible the values of total output. As regards forest products it would be useful if the product were evaluated before and after any processing such as saw-milling.

Government Accounts

Where government occupies an important place in the economy of the country the analysis of government accounts for national income purposes becomes one of the most significant parts of the estimates. It may be necessary to request that a codification of transactions be introduced. This may involve not only the Treasury and the Accountant General's Department but such departments as the Public Works Department which has a large number of transactions with other sectors of the economy.

Such a system of coding would inevitably take time to introduce and in the present study it was not found possible to break down transactions in any more detail than that appearing in the annual accounts of the Accountant General. Nevertheless when the final estimates were made it was felt that a weakness existed in this sector, and that further analysis of government transactions should be made. Basically this would involve establishing a code by which each transaction would be recorded as a receipt to or a payment from a specific sector of the economy. The system would presumably be worked out by the Statistics Bureau, who would be in a position to know the type of information and classification required, but ultimately the totals should appear as part of the routine figures of the department concerned.

The above notes survey briefly the type of information required from those departments which are in possession of the most useful material for national income purposes. Other government departments may of course be approached for specific information and may be requested to keep information in a form most useful for national accounts purposes.

APPENDIX I

The Classification of Imports for National Accounting

The introduction of the Standard International Trade Classification makes it possible to draw up lists showing imports divided into three groups: (a) capital goods; (b) consumer goods; and (c) materials entering into production. The first class, capital goods, which includes mainly plant machinery and vehicles, assists in the estimates of capital formation. In this context it should be noted that such items as cement and building materials are "materials entering into production" rather than capital goods. This follows from the treatment of the construction sector of the economy whose total final output, less maintenance items, represents capital expenditure.

The second class, consumer goods, is invaluable when the consumers expenditure tables are being set up since these items, plus margins, enter directly into personal consumption expenditure. The third class, which is not listed here is in a sense a "residual" class and it may not be analysed in detail. An analysis of these items "materials entering into production" does however give some indication of the transactions between various internal sectors and the overseas sector.

The trade returns are published in detail and fairly promptly in British Guiana. The items were then listed into the three groups directly from the published trade returns.

The lists below show the items and their S.I.T.C. numbers as they were classified by (a) capital goods; and (b) consumer goods.

LIST A

Imports Classified as Capital Goods

Item	*Standard International Trade Classification No.*
Firearms	691.0
Hand tools	699.12.1
Other tools	699.12.2
Safes etc.	699.11
Tailors' shears	699.17.4
Fire extinguishers	711.01-03.2
Machinery, gas and steam	
parts	711.03.3
Aircraft engine	711.04.1
parts	711.04.2
Road engine	711.05.1
parts	711.05.4
Marine engines	711.05.2-05.-
Stationary engines	711.05.3, 05.7, 05.9
parts	711.05.42, 05.8
Agricultural machinery	712.01.02
parts	712.02
Livestock machinery	712.03

Tractors, agricultural	713.01.1
industrial	712.01.3
parts	713.01.4
Other tractors	713.01.7
Metal-working machinery	715
Mining machinery	716.01.1
parts	716.01.2
Trucks and parts	716.02
Mining and construction machinery	716.03.1
Oil exploring	716.03.3
Other extraction	716.03.4
Road rollers and parts	716.03.5-6
Other	716.03.7
Wood-working machinery	716.04
Pneumatic tools	716.05
Printing machinery	716.07.2
Other and parts	716.07.3
Textile machinery	716.08
Sewing machines (40% as consumer goods)	716.11.1
parts	716.11.2
Airconditioning machinery	716.12
Distilling machinery	716.13.1
Grain milling machinery	716.13.2
Sugar-making machinery	716.13.3
Other machinery	716.13.4
Ball and roller parts	716.14
Machine parts	716.15
Electric motors	721.05
Batteries (25% as consumer goods)	721.02
Radio transmitters	721.04.1
Commercial receivers	721.04.2
Telephoning apparatus	721.04.3
Telephones	721.05.1
Telegraphy	721.05.2
Parts for vehicle	721.07
Meters	721.08.1
Medical equipment	721.11
Tools	721.12.2
Accumulators and parts	721.17
Railway locomotives and parts	731.03
Road vehicles and parts (smaller models as consumer goods. Capital imports of cars adjusted to number of new taxis registered)	732.01.3, 03.1, 03.3, 05.1, 05.2, 06.2
Tractors and parts	733.09.4
Aircraft and parts	734.01-03
Ships boats and parts	735.09.4, 735.09.3
Cane punts	735.09.4
Office furniture	821.02.3
Optical instruments	861.01
Cinema apparatus and parts	861.02.4-02.5
Surgical instruments	861.03
Measuring instruments	861.09
Commercial refrigerators and parts	899.08, 05-06
Water coolers	899.08-09
Animals of burden	921.01-03

LIST B

IMPORTS CLASSIFIED AS CONSUMER GOODS

Item	*Standard International Trade Classification No.*
Animals, fresh meat, pickled and salted meat and meat products	001.0 - 013.1.09
Dairy products, fresh and preserved	021.0 - 024.01
Eggs	025.02
Ice cream powders, etc.	029.09.1
Fish, fresh and preserved	031.01 - 032.011.02
Cereals and cereal preparations	046.01 - 048.09.2
Fruits, fresh and preserved	051.01 - 053.04.11
Vegetables, fresh and preserved	054.01 - 055.04.5
Beverages and spices	071.01 - 075.02.9
Miscellaneous foods and preparations	091.01 - 099.09.13
Alcoholic and soft drinks	111.01 - 112.04.12
Cigarettes and tobacco	122.01 - 122.04
Seeds, nuts and kernels	221.01 - 221.09.9
Table salt	272.05.2
Motor spirit and agents (part)	313.01.3 - 313.01.4
Lamp oils	313.02
Other household oils and fats	411.01 - 412.1.19
Medicinal and pharmaceutical preparations	541.01 - 541.02
Perfumery, cosmetics	552.01 - 552.02.11
Polishes	552.03.6
Insecticides	599.02
Starches	599.03
Inner tubes and casings (part)	629.01
Paper and wallpaper	641.02 - 641.08
Textile yarn and thread	651.01 - 651.06.2
Fabrics (part)	652.01 - 654.02.2
Ribbons and embroidery	654.03.04
Blankets and curtains	656.03 - 656.09
Floor coverings	657.01.04
Glassware	665.01 - 665.09.3
Pottery	666.01 - 661.01.3
Jewellery	673.01 - 673.02
Needles and pins	699.08
Household utensils	699.12.15
Cutlery, razors, scissors	699.16 - 699.17
Hardware	699.18
Stoves	699.22
Lawn mowers	712.09
Sewing machines (part)	716.11.1
Batteries (part)	721.02
Bulbs	721.03
Radio receivers	721.04
Electrical appliances	721.06
Motor cars (part)	732.01.1
Motor cycles	732.01.2
Bicycles	733.01
Hand trucks and perambulators	733.09
Oil lamps, lanterns and parts	812.04
Furniture	821.01 - 821.09.2
Travel goods	831.01.02
Clothing and footwear	841.01 - 851.01.09
Cameras, films, etc.	861.02 - 862.01
Watches and clocks	864.01 - 864.02.3
Musical instruments, records, etc.	891.01 - 891.09.4
Printed matter	892.01 - 892.09.3
Other miscellaneous goods	899.01 - 899.07.3
Domestic refrigerators	899.08
Basketware	899.12
Brooms and brushes	899.13
Sports goods	899.14
Toys, games, fountain pens	899.15
Pipes and cigar holders	899.18

APPENDIX II

A "Crash" Programme for National Income Estimates

One of the problems of national income estimation is that of preparing reliable estimates relating to a period which is recent enough to be of relevance to the existing economic situation. It is inevitable, that if a thorough job of work is done on the estimates, full use must be made of the most important sources such as inland revenue returns and certain other returns which are made during the year following the relevant year. This generally means that, by the time all returns are in and analyzed the estimates cannot be completed in year $x+1$, but are held over until years $x+2$, where year x is the year for which complete estimates are made. This is likely to reduce substantially the value of the estimates to administrators, politicians and businessmen. Thus proposals are made below which enable a less detailed set of estimates to be prepared in year $x+1$. This in no way lessens the need for the fuller estimates which will be made in year $x+2$. The basis of the crash programme will be to apply global indicators to the overall pattern of estimates made for the latest year in which a thorough survey was made (in this case presumably year $x-1$). The "crash" programme should enable very broad estimates of national income in year x to be prepared and issued in the middle of year $x+1$. They should in fact be worked out as a final exercise on the more thorough survey of year $x-1$. It is not anticipated that a great deal of time and labour will be required to produce them. The plan set out below outlines the minimum requirements of data for such an estimate. Any supplementary data which are available and which can be used will of course enhance the reliability and comprehensiveness of the results.

The method used to bring out the "crash" estimates for gross domestic product is as follows. The economy will be considered on the basis of the main industries. For each industry a sector account will be available which relates to the last year in which complete estimates were made (in this case year $x-1$). Each sector account will take the following form:

Sector Account. Industry A.

Receipts			*Expenditure:*			
			b Wages and salaries		x	%
			c Payments to other sectors		y	%
			d Profits, rent etc. (including stock charge)		z	%
a. Total receipts	=	100	e Total expenditure	=	100	

The first assumption made for the initial crash programme is that in year x total receipts will be different from total receipts in year $x-1$ but that the *pattern* of outgoings will remain constant.

This assumption can however be modified to take account of the fact that wage data or data of one of the other main outgoings may be known to have altered out of proportion to the other outgoings. (If, for instance, the total sugar industry wages bill is available the information can be utilized in this way).

Generally speaking, however, the main indicator required is total receipts for each industry. In some cases this may have to be arrived at by obtaining physical quantities and raising them by the price of the product.

Total receipts (or "sales") will easily be obtained from the following industries:

a) Sugar, from the companies and Department of Agriculture;
b) Rice, from the Department of Agriculture and the Rice Marketing Board;
c) Other crops and livestock.

An estimate should be obtained annually from the Department of Agriculture showing in very approximate terms what they believe the production and price movements to have been in those products which contribute significantly to the gross domestic products. For instance, agricultural officers may be in a better position than any one else to make a guess as to whether root crop production has increased by say 10 per cent (approximately), declined or remained fairly stable. They may be in a position to judge the likely effects on production of peculiar weather conditions. Of course this estimate is likely to be of a highly approximate nature but it will be corrected by firmer data when such become available. (If firmer data are already being processed at the Department of Agriculture, the "guesses" will be strengthened).

Under processing, rice milling totals can be obtained from the Rice Marketing Board and sugar processing from the companies. It is however suggested that for the purposes of the "crash" programme processing of sugar and rice is not separated from the primary sector of the industry.

The smaller manufacturing industries can only be included in the "crash" programme if data are available regarding total values of output. This could possibly be obtained directly from such industries as matches, cigarettes, beer, biscuits, etc. and from the electricity producers. Other smaller industries can only be treated either as having had no change over the previous year, having the same per cent change as the remaining sectors or a combination of these methods combined with local knowledge of conditions. In any event the results will not materially affect the gross domestic product or its allocation between industries.

For engineering and construction, one broad indicator may be the number of houses built in the year (this of course applies only to residential dwellings). It should however be possible to get the information on capital expenditure from the main firms in time for the crash programme, and government investment can be estimated. This leaves only investment by smaller

concerns and the engineering maintenance industries which may have to be estimated on the arbitrary basis as suggested for smaller processing firms. Other indicators which may throw light on the engineering and construction sector are imports of capital goods and imports of cement and building materials. If capital formation estimates have been made much of the important data will be available.

For distribution it will be necessary to construct an index of retail sales. This can be taken as indicative of distribution trends. Although all income tax returns may not have been received, it is suggested that by April of year $x+1$ the Income Tax Department may be able to furnish figures for a sample of distributive firms, showing for the firm in question per cent change in total sales only as between year $x-1$ and year x. If it is found that the larger firms have not yet made returns they may be approached for figures of total sales in year x and year $x-1$. The Statistical Bureau may find it worthwhile to run a permanent sample on this basis which could possibly even show half yearly values. Indicators of retail sales are of value to businessmen and they are usually ready to supply the information providing they know their own business data will be combined with returns from a larger number of businesses.

For transport, information may be more difficult to obtain for certain sections. For road vehicles, the values of year $x+1$ can be inflated or deflated by changes in the number of registered vehicles in year x. The Transport and Harbours Department should be able to supply figures for the railways and some shipping and wharf activities. B.G. airways should also be able to supply overall receipts figures (if nothing further).

Little can be done at the moment regarding banks or insurance companies. It is however a recognized fact in more advanced countries that the most comprehensive statistics are required by government annually and early in the affairs of banks and insurance companies and this should certainly be required by West Indian countries, if necessary by legislation. It cannot in any way be considered as an imposition on these companies as their head offices are accustomed to supplying such data to government in Canada and the United Kingdom.

For professions, catering and domestic and personal service, an arbitrary estimate may have to be made pending further information, although figures of numbers of professional people, including teachers, may be available. For rent of dwellings it may be possible to obtain a sample, but experience indicates that year to year changes in this sector are small. Government accounts may create a particular problem as audited accounts may not be ready. It should be remembered however that for the purposes of gross domestic product all that is needed is the total of wages and salaries paid and an estimate of government income from property. Some breakdown between current and capital expenditure is also needed and this may have to be taken from the estimates.

The above system will produce a "crash" table of gross domestic product

at factor cost by broad groups of industries. It may be considered that this will be all that will be possible in the initial phase. Some broad estimates of national income may be derivable from it and import figures of consumer goods may provide a partial indicator to consumers' expenditure which can be viewed in relation to the retail sales indicator. Export figures will be available to supplement figures of output.

The results of such an investigation will show mainly the share of different industries in the gross domestic product and the total figure for gross domestic product at factor cost. These figures will be a fairly useful indicator of the state of the economy and will show certain trends, but they are naturally limited in their value. The figures will be of much greater value if supplemented by capital formation figures. The derivation of national income can also be made from the "crash" computations if data are available regarding factor incomes received from overseas and paid overseas.

In timing, it should be possible to prepare the "crash" estimates for year x immediately the thorough figures for year $x-1$ become available. Ideally, the national income for year $x-1$ should be published in about June of year $x+1$. The "crash" estimates could be published simultaneously as "projections for year x", but it must be made clear that they are strictly provisional and it should be left to the government statistician's discretion whether the "crash" estimates can be considered sufficiently reliable for release to the general public or whether they should be used for internal government consumption only.

APPENDIX III

Estimates of Domestic Product for 1957

On the basis of overall production indicators, Mr. H. O. E. Barker, British Guiana Government Statistician, drew up a provisional table showing the gross domestic product by industrial origin for 1957. This table is shown below; it may be noted that most of the main indicators on which this table are based were available in the earlier part of 1958.

The fundamental assumption made for such a provisional estimate is that the proportion of factor shares to gross value of output has not changed from that of the previous year. It is believed that this is a fairly safe assumption to make providing that the provisional nature of the estimate is understood and providing it is followed up by a more thorough study of the national income. It might for instance be dangerous to carry on into a second year, simply applying main production indicators to the structural pattern of the more thorough study. Some changes may have taken place in the structural pattern, at least of some of the main industries.

INDUSTRIAL ORIGIN OF GROSS DOMESTIC PRODUCT AT FACTOR COST

	1957		1956 (from Table 2)	
	$ mn	%	$ mn	%
Sugar cane	24.9	11.1	21.5	10.3
Rice farms	8.5	3.8	8.8	4.2
Coconut	2.0	0.9	2.6	1.2
Crops	5.5	2.5	4.9	2.4
Livestock	5.2	2.3	4.4	2.1
Forestry	5.0	2.2	5.3	2.6
Fishing	4.4	2.0	5.2	2.5
Mining	24.3	10.9	23.5	11.3
Processing	19.6	8.8	16.7	8.0
Manufacture	8.0	3.6	6.6	3.2
Construction	27.0	12.1	21.5	10.3
Distribution	31.5	14.1	30.4	14.6
Transport: road	6.6	3.0	6.6	3.2
Water, rail, wharves	6.6	3.0	6.5	3.1
Air and communications	.6	0.3	.6	.3
Finance and insurance	4.1	1.8	4.0	1.9
Professions	3.4	1.5	3.4	1.7
Catering	.6	0.3	.6	.3
Personal service and entertainment	2.1	0.9	1.9	.9
Rent of dwellings	5.6	2.5	5.5	2.6
Government	27.7	12.4	27.5	13.3
Total	223.2	100.0	208.0	100.0

The increase in the gross domestic product from $208 mn to $223 mn between 1956 and 1957 is encouraging. Increases in sugar values affect both the sugar cane and processing sectors. The increases in construction also reflect a growth in capital formation both public and private. Perhaps one of the most pleasing increases is that of the manufacturing sector from $6.6 mn to $8 mn. It may of course be found that some amendments need to be made to the figures when the final estimates for 1957 are available but the general picture shown by these figures is believed to be a good representation of the movement of gross domestic product during the year 1957.

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